ORDER NO.VMD0004016C8

Service Manual

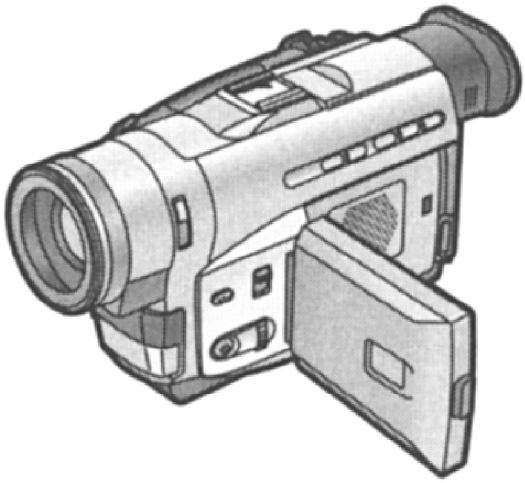
Digital Video Camera/Recorder

Panasonic Mini DV PAL

NV-DS15EG / NV-DS15B / NV-DS15EGM / NV-DS15EN / NV-DS15ENC / NV-DS15A / NV-DS150EG / NV-DS150B

VOL.1

Q3-MECHANISM



SPECIFICATIONS

SPECIFICATIONS

ITEM	SPECIFICATION	ITEM	SPECIFICATION
POWER	Source: Battery Pack; 7.2 V DC AC Adaptor; 7.9 V DC Consumption: During Camera Recording Using The LCD Monitor; 4.9 W During Camera Recording Using The Viewfinder; 4.2 W	AUDIO	RECORDING FORMAT: PCM Digital Recording: 16 bit (48 kHz/2 ch) 12 bit (32 kHz/4 ch)
			MIC IN LEVEL: -70 dBV / 5.6 kΩ OUTPUT LEVEL: 316 mV, 600Ω
RECORDING FORMAT	Digital Video SD Format	DIGITAL STILL PICTURE	Digital Still Picture Output, Control Signal Input / Output (Transfer rate: max. 115 kbps)
TAPE FORMAT	Mini DV Cassette Tape (Tape width 6.35 mm)	DIGITAL INTERFACE	DV Output Terminal (i. LINK, 4 pin):NV-DS15 DV Input/Output Terminal (i.LINK, 4-pin):NV-DS150
TAPE SPEED	SP mode : 18.83 mm/s LP mode : 12.57 mm/s Record/Playback Time: SP mode : 80 min. with DVM80 LP mode : 120 min. with DVM80	MICROPHONE	Stereo
		SPEAKER	1 round speaker φ28 mm
CAMERA	PICK-UP ELEMENT: CCD (Charge Coupled Device)	OPERATING TEMPERATURE	0-40 °C
	STANDARD ILLUMINATION: 1,400 lx	OPERATING HUMIDITY	10-80 %
	MINIMUM REQUIRED ILLUMINATION: 1 lx (Digital Gain-up Mode)	WEIGHT	Approx. 680 g (without Battery Pack)
	LENS: 20 : 1 Power Zoom, Auto Iris, F1.6, Macro (Full Range AF) Focal Length; 2.9-58.0 mm Filter Diameter; 43.0 mm	DIMENSIONS	Approx. 190 (W) x 98 (H) x 69 (D) mm
	IMAGE SENSOR: 1/4-inch CCD Image Sensor	STANDARD ACCESSORIES	1 pc. AC Adaptor 1 pc. Battery Pack Unit 1 pc. S-VIDEO Cable 1 pc. Shoulder Strap 1 pc. DC Input Cable 1 pc. AC Mains Cable 1 pc. AV Cable 1 pc. Remote Controller 1 pc. Bottom-type Battery 1 pc. Cassette 1 pc. Head Cleaner 1 pc. Hood Cap Unit
	VIEWFINDER: Colour Electronic Viewfinder 2.5-inch Colour LCD Monitor		
VIDEO	RECORDING FORMAT: Digital Component		
	TELEVISION SYSTEM: CCIR; 625 Lines, 50 Fields PAL Colour Signal		
	VIDEO OUTPUT LEVEL: 1.0 Vp-p, 75Ω S-VIDEO OUTPUT LEVEL: Y; 1.0 Vp-p, 75Ω C; 0.3 Vp-p, 75Ω		

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Panasonic

1. INTRODUCTION

1.1. INTRODUCTION1

This service manual contains technical information which will allow service personnel's to understand and service this model.Please place orders using the parts list and not the drawing reference numbers.
If the circuit is changed or modified, this information will be followed by supplement service manual to be filed with original service manual.

Note 1:
These movie camera uses AC Adaptor is VSK0581.
The service manual for AC Adaptor is separate volume.
Order number for AC Adaptor-----VSK0581 : VMD0004017C8

Note 2:
This service manual does not contain the following information, because of the impossibility of sevicing at component level.

1. Schematic Diagram, Block Diagram and C.B.A. layout of Main C.B.A.
2. Parts List for individual parts of Main C.B.A.
3. Exploded View and Parts List for individual parts of Mechanism Unit.

When a part replacement is required for repairing Main C.B.A. and/ or mechanism block, replace the assembly parts. (Main C.B.A. and/ or mechanism Unit)
The following circuits are contained in Main C.B.A.

1. Main Connection Circuit
2. Drive Circuit
3. AV Driver Circuit
4. Video 1 Circuit
5. Video 2 Circuit
6. Video 3 Circuit
7. Control Circuit
8. Camera Circuit
9. Digital Interface Circuit
10. Lens Drive Circuit
11. LCD Circuit
12. RS232C Circuit
13. Head/ Rec Amp Circuit

1.2. INTRODUCTION 2

NOTE: NV-DS15

NV-DS15 series has to versions depends on countries. Detail as follows.

Model-No (Version)	NV-DS15EN	NV-DS15ENC
PACKING CASE	VPK2350	VPK2351
AC-CABLE	VJA0940	VJA0664

2. CAUTION FOR AC CORD (VJA0940 TYPE)

2.1. INFORMATION FOR YOUR SAFETY

IMPORTANT
Your attention is drawn to the fact that recording of pre-recorded tapes or discs or other published or broadcast material may infringe copyright laws.

WARNING

To reduce the risk of fire or shock hazard, do not expose this equipment to rain or moisture.

CAUTION

To reduce the risk of fire or shock hazard and annoying interference, use the recommended accessories only.

FOR YOUR SAFETY
DO NOT REMOVE THE OUTER COVER
To prevent electric shock, do not remove the cover. No user serviceable parts inside. Refer servicing to qualified service personnel.

2.2. CAUTION FOR AC MAINS LEAD

For your safety, please read the following text carefully.
This appliance is supplied with a moulded three-pin mains plug for your safety and convenience.
A 5-ampere fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5 amperes and it is approved by ASTA or BSI to BS1362
Check for the ASRA mark or the BSI mark on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover, the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local Panasonic Dealer.
If the fitted moulded plug is unsuitable for the socket outlet in your home then the fuse should be removed and the plug cut off and disposed of safety.
There is a danger of severe electrical shock if the cut off plug is inserted into any 13-ampere socket.
If a new plug is to be fitted please observe the wiring code as shown below.
If in any doubt, please consult a qualified electrician.

2.2.1. Important

The wires in this mains lead are coloured in accordance with the following code:

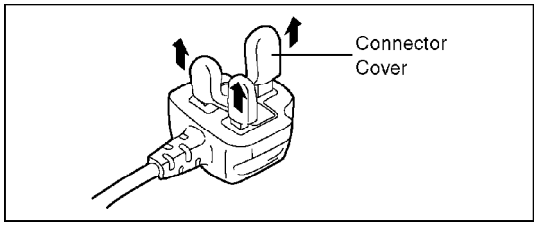
Blue	**Neutral**
Brown	**Live**

As the colours of the wires in the mains lead of this appliance may not correspond with the

coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured BLUE must be connected to the terminal in the plug which is marked with the letter N or coloured BLACK.
The wire which is coloured BROWN must be connected to the terminal in the plug which is marked with the letter L or coloured RED.
Under no circumstances should either of these wires be connected to the earth terminal of the three pin plug, marked with the letter E or the Earth Symbol.

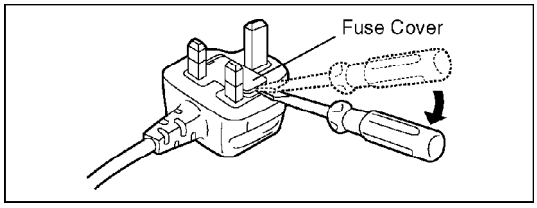
2.2.2. Before use

remove the Connector Cover as follows.

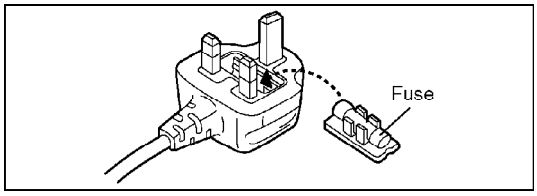


2.2.3. How to replace the Fuse

1. Remove the Fuse Cover with a screwdriver.



2. Replace the fuse and attach the Fuse cover.



3. SERVICE CAUTION

3.1. EEPROM DATA FOR SPARE PARTS OF THE MAIN C.B.A.

When the Main C.B.A. is replaced, the fixed and average data must be changed by Tatsujin kit according to the Movie Camera's suffix.
Then, confirm and/or adjust the VTR and Camera adjustment one by one.

3.2. SERVICE EXTENSION CABLES.

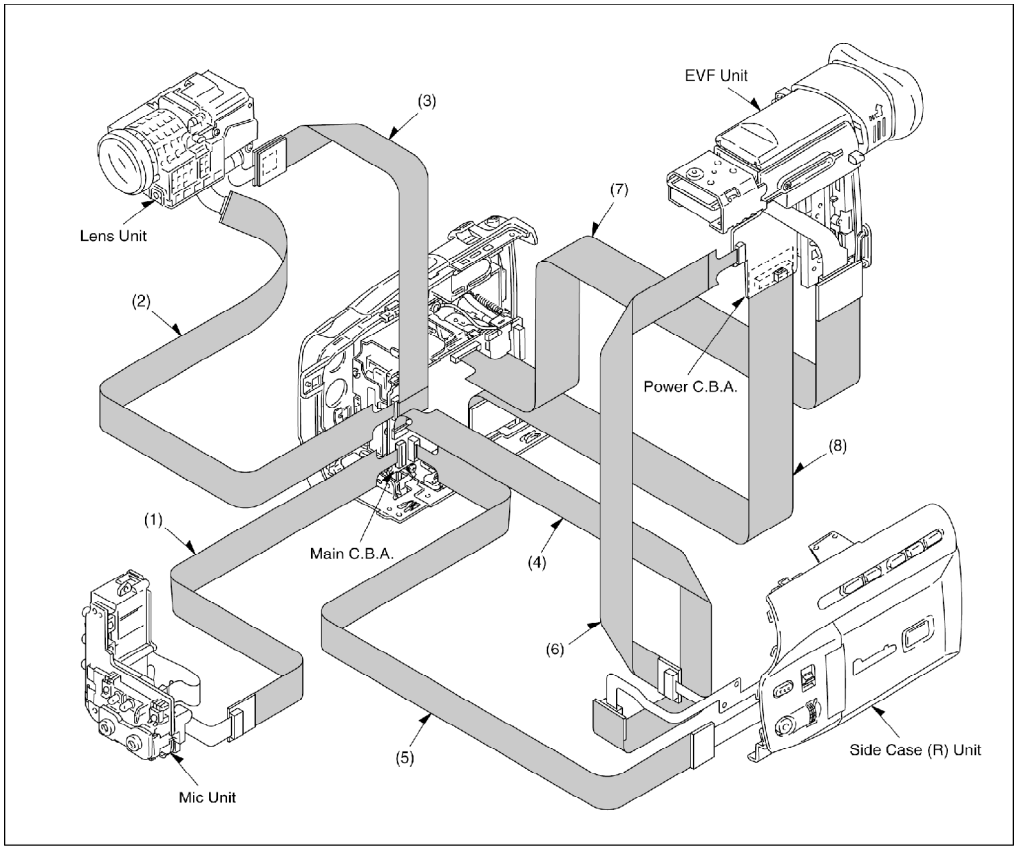
This models is required the following extension cables for all connections.

Note 1:
Use the following extension cables when checking or adjusting individual circuit boards except module Parts. (Main C.B.A.)

Ref.	Part No.	Pin	Part Name	Connection	Q'ty	Ren
(1)	VFK1459	39	Flat Cable	FP4801 (Main) - FP4903 (Mic Unit)	1	As N
(2)	VFK1582A2120	21	Flat Cable	FP701(Main) - Lens Flex.	1	As N
(3)	VFK1595D1425	14	Flat Cable	PP201(Main) - PS291 (CCD FPC)	1	Nev
(4)	VFK1442	21	Flat Cable	FP601(Main) - FP904 (Monitor)	1	As NV
(5)	VFK1582A1725	17	Flat Cable	FP6302(Main) - Side Case R	1	Nev
(6)	VFK1582A1625	16	Flat Cable	FP602(Power) - FP903(Monitor)	1	As N
(7)	VFK1492	26	Flat Cable	FP801(Main) - FP802(EVF)	1	As NV
(8)	VFK1595A8025	80	Flat Cable	PS1001(Main) - PP1001(Power)	1	Nev

How to use extension cables.

Fig. T1-1



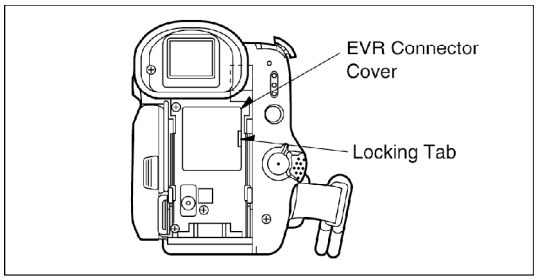
3.3. LOCATION FOR SPARE CONNECTORS OF THE MAIN C.B.A.

4. PREPARATION FOR ELECTRICAL ADJUSTMENT

1. Unlock the locking tab and remove the EVR connector cover which is located on Battery Catcher Unit as follows.

2. Then connect the following cables as shown in Fig. E2.

Fig. E1



Part No.	Part Name	Q'ty	Remarks
VFK1395	232C(M3)I/F Cable	1	
VFK1308E	Measuring Board	1	
VFK1309	EVR Connector Board	1	
VFK1317	30 Pin Flat Cable	2	
VJA0941	DC Output Cable	1	For AC Adaptor
VFK1164TAR3A	Setup Ring	1	For Collimator
VFK1309EX	Connection Adaptor	1	

Fig. E2

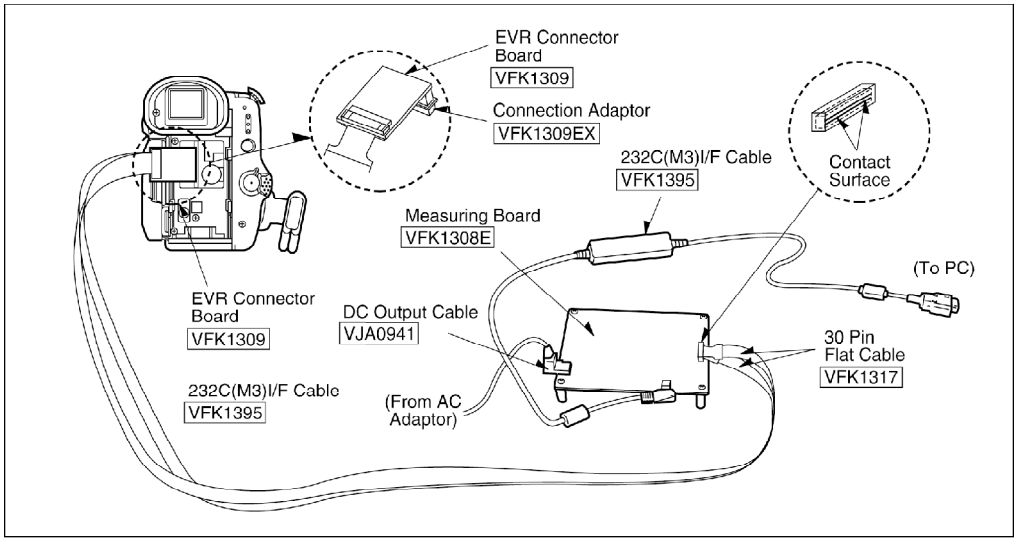
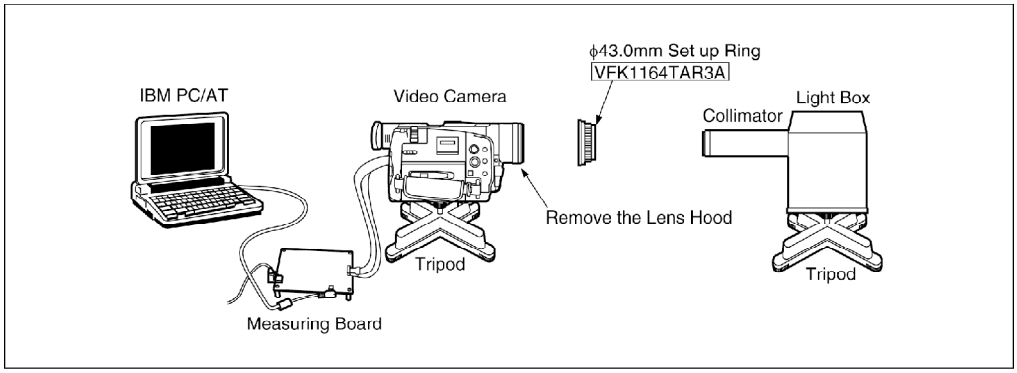
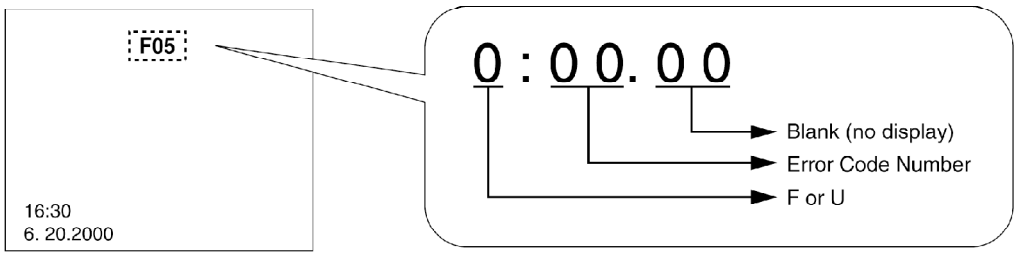


Fig. E3



5. SERVICE MODE

When undesirable conditions occurred, the error code is displayed on the EVF or LCD Monitor. Also, the Camera LED is flashed according to the error code as follows.



EVF or LCD Monitor

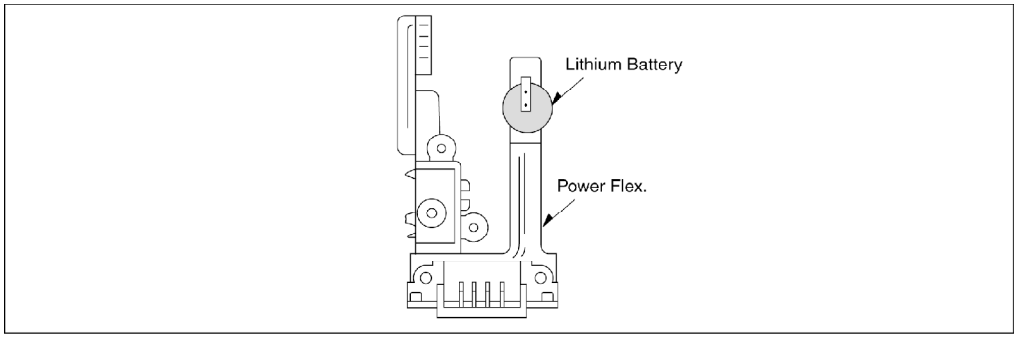
DISPLAY	CONDITION	POWER OFF TIMING / POWER LED FLASHING TIMING
F01	T-Reel Lock	After 1 minute flashing the LED
F02	S-Reel Lock	After 1 minute flashing the LED
F03	Unloading Lock	After 1 minute flashing the LED
F04	Loading Lock	After 1 minute flashing the LED
F05	Cylinder Lock	After 1 minute flashing the LED
F31	Data Transmission Error	Not turning OFF
F51	Focus Motor Lock	Not turnig OFF Power LED is flashed at 1 Hz timing
F52	Zoom Motor Lock	Not turnig OFF Power LED is flashed at 1 Hz timing
U10	Dew Detection	After 18 seconds flashing the LED Power LED is flashed at 1 Hz timing
U11	Head Clogging	Not turning OFF

6. HOW TO REPLACE THE LITHIUM BATTERY (PROCEDURE)

1. Remove the Power Flex. from Rear Case Unit. (Refer to Disassembly Procedures.)

2. Unsolder the Lithium Battery“ML920S” and then replace the new one. (See Fig. B1.)

Fig. B1



Note:
The lithium battery is a critical component. (Type No.: ML920S Manufactured by Panasonic.)
It must never be subjected to excessive heat or discharge.
It must therefore only be fitted in equipment designed specifically for its use.
Replacement batteries must be of the same type and manufacture.
They must be fitted in the same manner and location as the original battery, with the correct polarity contacts observed.
Do not attempt to re-charge the old battery or re-use it for any other purpose.
It should be disposed of in waste products destined for burial rather than incineration.

CAUTION

Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type recommended by the equipment manufacturer.
Discard used batteries according to manufacturer's instructions.

VARNING

Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens instruktion.

ADVARSEL!

Lithiumbatteri - Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandøren.

VAROITUS

Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

7. OPERATING GUIDE

8. ADJUSTMENT PROCEDURES

8.1. DISASSEMBLE FLOW CHART

This flow chart indicates the disassembly steps the cabinet parts, C.B.A. and Mecha. Unit in order to access to be serviced. When reinstalling, perform the steps in the reverse order.

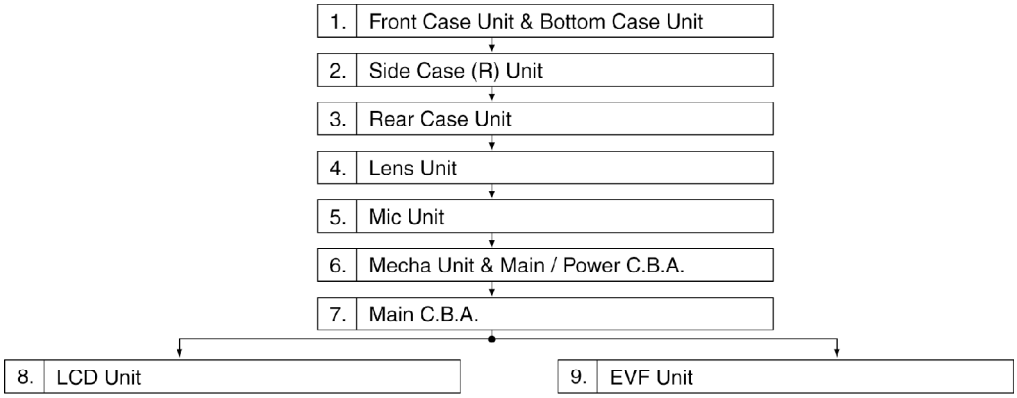
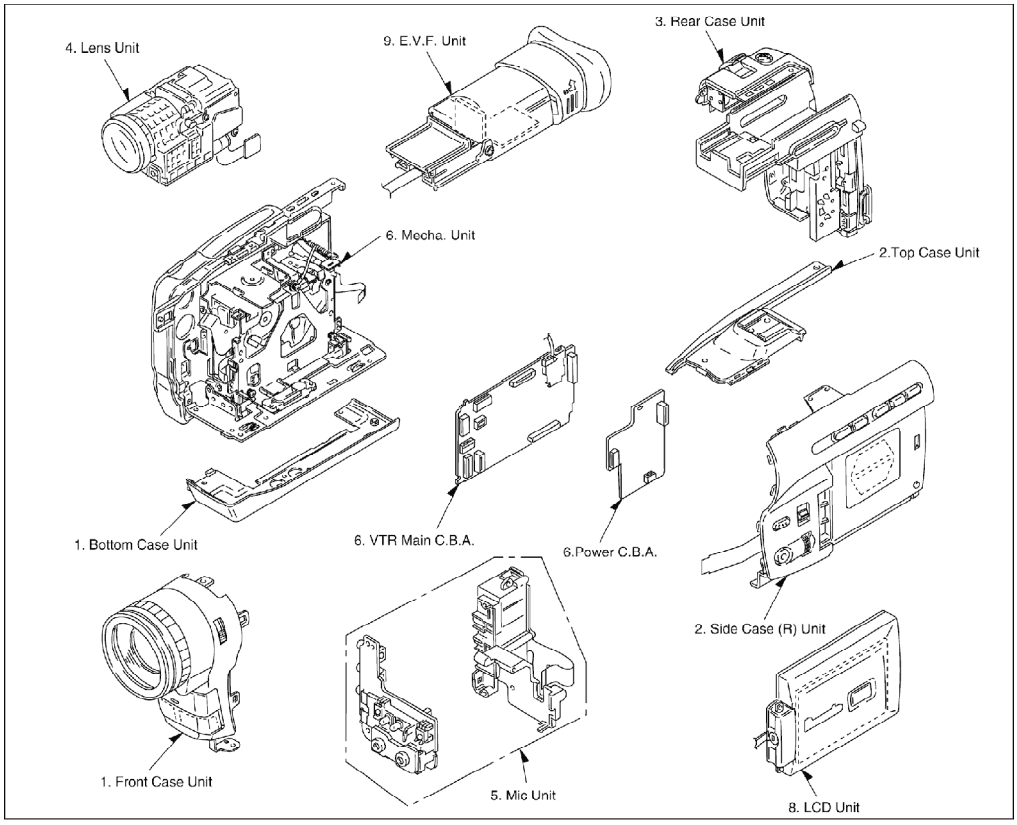

1. Front Case Unit & Bottom Case Unit
2. Side Case (R) Unit
3. Rear Case Unit
4. Lens Unit
5. Mic Unit
6. Mecha Unit & Main / Power C.B.A.
7. Main C.B.A.
8. LCD Unit
9. EVF Unit

Fig. F1



8.2. DISASSEMBLY PROCEDURES

Flow-Chart for Disassembly Procedure

No.	Item/Part	Fig.	Removal(Screw& Other)
1.	Front Case Unit& Bottom Case Unit	Fig. 1-1	5-Screws(A/B/C)
		Fig. 1-2	6-Screws(D/E)
		Fig.1-3	1-Screw(F) 1-Screw(G)
		Fig.1-4	Unlock---(a) Remove the Bottom Case Unit. Unlock---(b) Remove the Front Case Unit.
2.	Side Case (R) Unit	Fig. 2-1	4-Screws(H/I/J)
		Fig. 2-2	Slide the Side Case (R) Unit. Disconnect the following connectors. FP601/FP602/FP6302/P4201 Remove the Side Case (R) Unit. Remove the Top Case Unit.
3.	Rear Case Unit (With EVF Unit)	Fig. 3	Disconnect the following connectors. FP1001/FP801 Remove the Rear Case Unit.
4.	Lens Unit	Fig. 3	2-Screws(K/L) Disconnect the FP701/PP201. Remove the Lens Unit.
5.	Mic Unit	Fig. 3	2-Screws(M) Disconnect the FP4801. Remove the Mic Unit.
6.	Mecha.Unit & VTR Main C.B.A./ Power C.B.A.	Fig. 4-1	Disconnect the P1001. Remove the Power C.B.A. Disconnect the FP6303/ FP6301. 3-Screws(N) Remove the Mecha.Unit& VTR Main C.B.A.
7.	VTR Main C.B.A.	Fig. 4-2	Disconnect the following connectors. FP5001/FP2202/FP2203/ FP2201/FP2204 Unlocks---(c/d) Remove the VTR Main C.B.A.

No.	Item/Part	Fig.	Removal(Screw& Other)
8.	LCD Unit	Fig. 5-1	5-Screws(O/P) Remove the LCD Unit from Side Case (R) Unit.
		Fig. 5-2	2-Screws(Q) Unlock---(e) Remove the LCD Case(Upper). Disconnect the following connectors. FP901/FP903/FP904/FP905 Unsolder read wire from Back Light Unit.
		Fig. 5-3	1-Screw(R) Remove the Back Light Unit DBEF Sheet and Monitor C.B.A.
9.	EVF Unit	Fig. 6-1	Remove the EVF Flex. from Battery Case Unit. Remove the EVF Plate Spring /EVF Slide Angle. 2-Screws(S) Remove the EVF Unit from Battery Case Unit.
		Fig. 6-2	6-Screws(T/U) Remove the Eye Cap Holder and EVF Case(Upper).
		Fig. 6-3	Pull out the EVF Flex. Remove the EVF Holder Piece.
		Fig. 6-4	Unlock---(f) Disconnect tht following connectors. FP802/FP803 Remove the E.V.F.(A) C.B.A.
		Fig. 6-5	Unlock---(g) Remove the E.V.F.(B) C.B.A.

Fig. 1-1

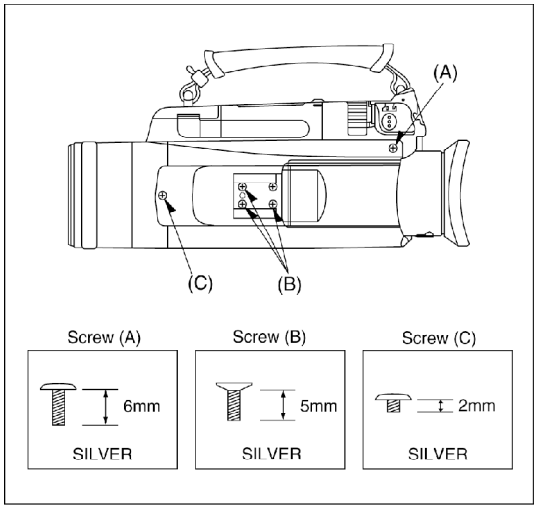


Fig. 1-2

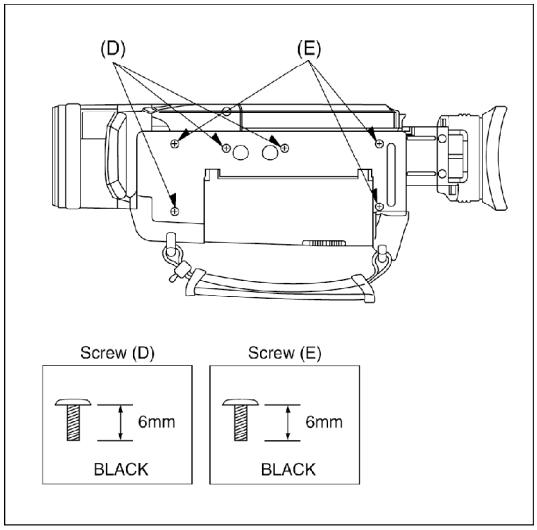


Fig.1-3

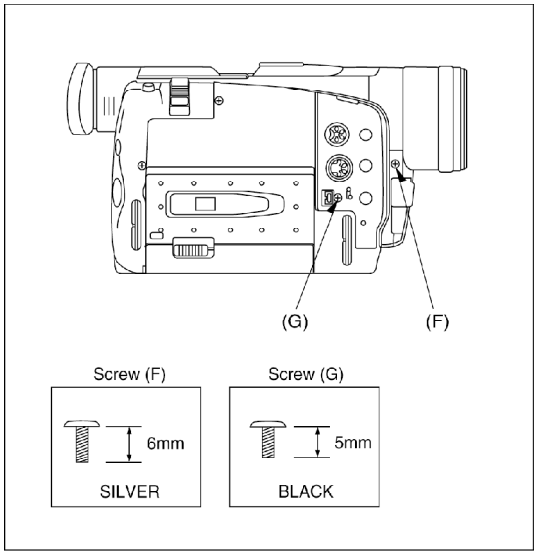


Fig.1-4

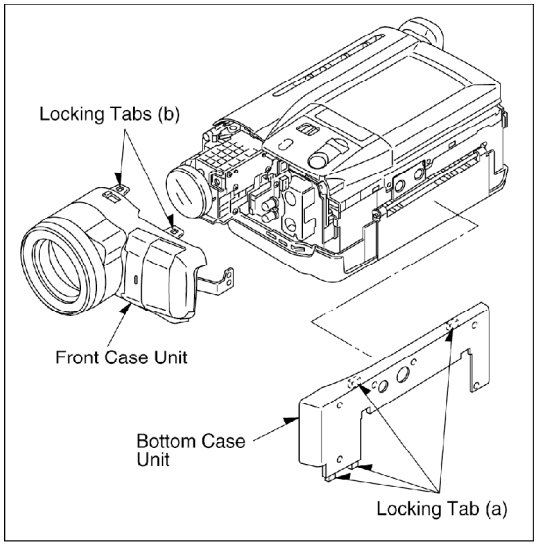

Locking Tabs (b)
Front Case Unit
Bottom Case Unit
Locking Tab (a)

Fig. 2-1

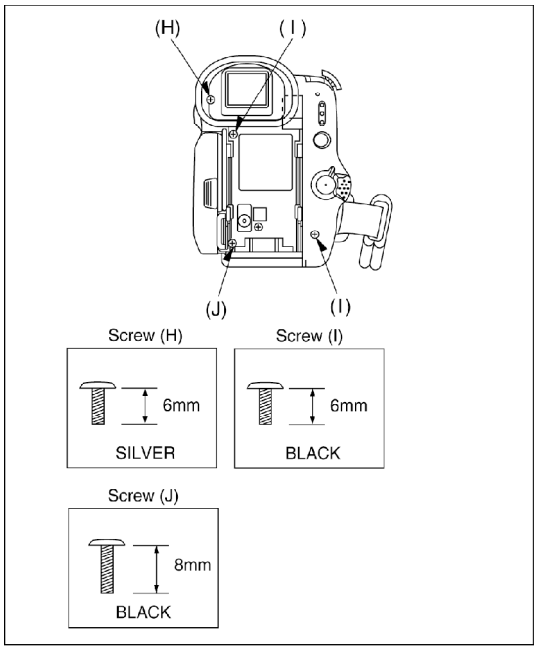

(H)
(I)
(J)
(I)
Screw (H)
6mm
SILVER
Screw (I)
6mm
BLACK
Screw (J)
8mm
BLACK

Fig. 2-2

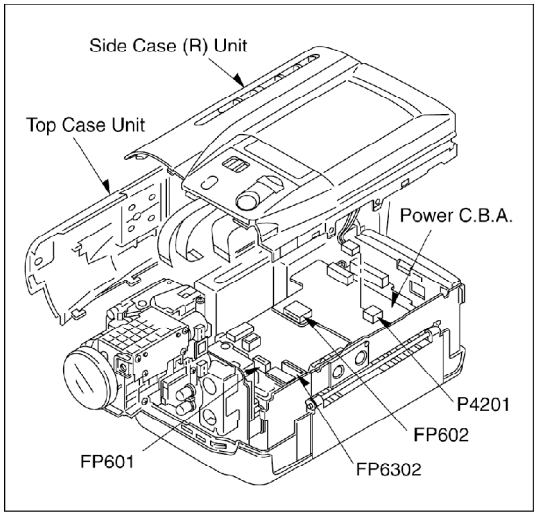

Side Case (R) Unit
Top Case Unit
Power C.B.A.
P4201
FP602
FP601
FP6302

Fig. 3

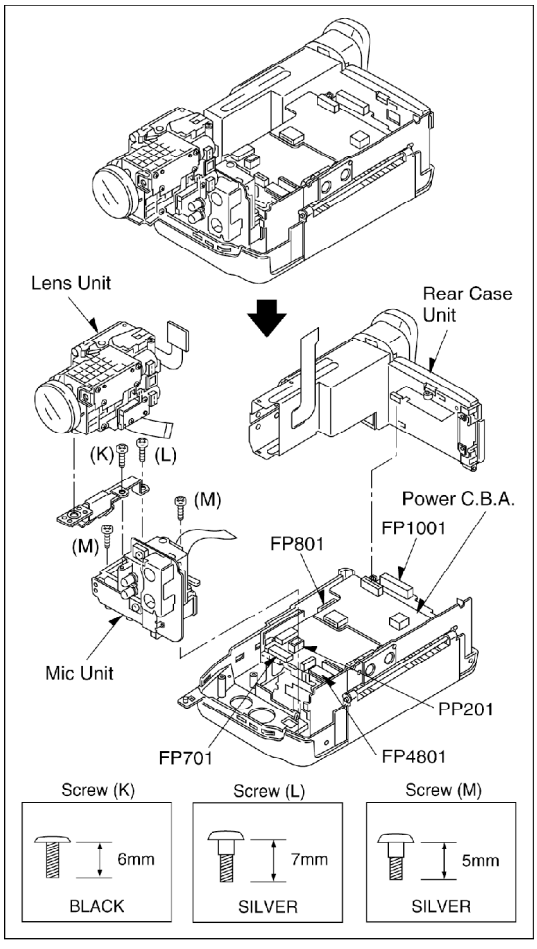

Lens Unit
Rear Case Unit
(K)
(L)
(M)
(M)
Power C.B.A.
FP1001
FP801
Mic Unit
PP201
FP701
FP4801
Screw (K)
6mm
BLACK
Screw (L)
7mm
SILVER
Screw (M)
5mm
SILVER

Fig. 4-1

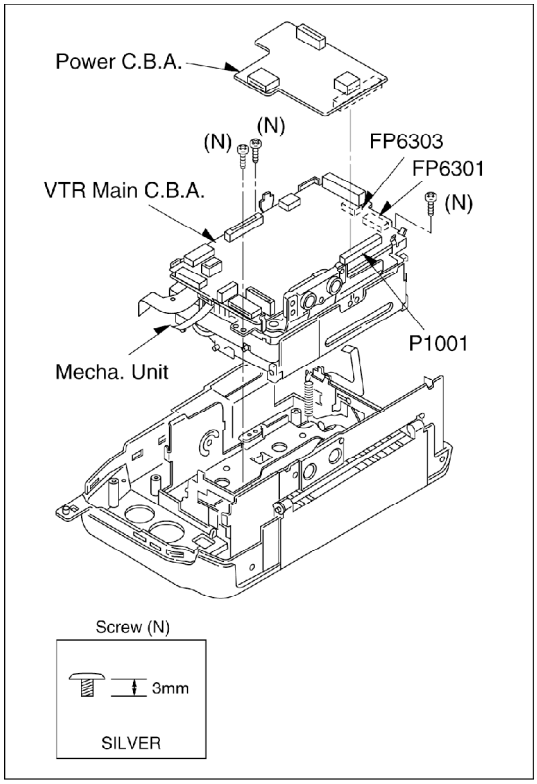

Power C.B.A.
(N)
(N)
FP6303
FP6301
VTR Main C.B.A.
(N)
P1001
Mecha. Unit
Screw (N)
3mm
SILVER

Fig. 4-2

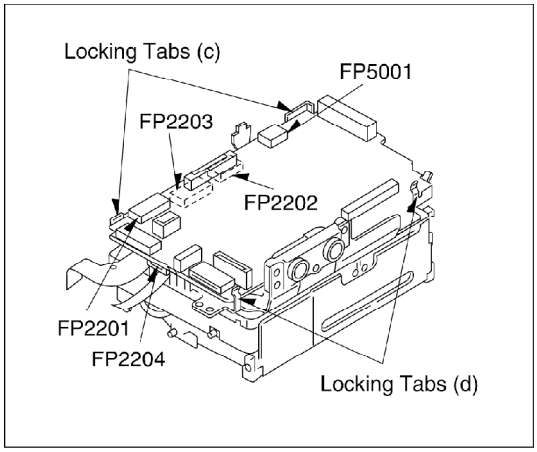

Locking Tabs (c)
FP5001
FP2203
FP2202
FP2201
FP2204
Locking Tabs (d)

Fig. 5-1

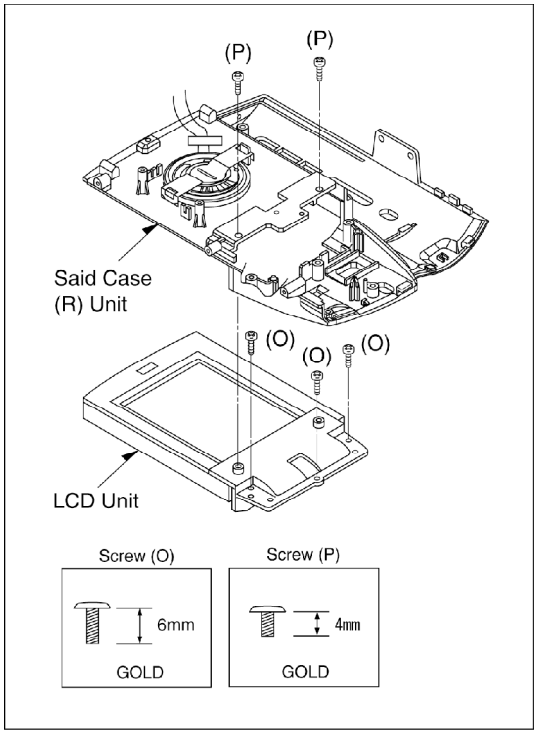

(P)
(P)
Said Case
(R) Unit
(O)
(O)
(O)
LCD Unit
Screw (O)
6mm
GOLD
Screw (P)
4mm
GOLD

Fig. 5-2

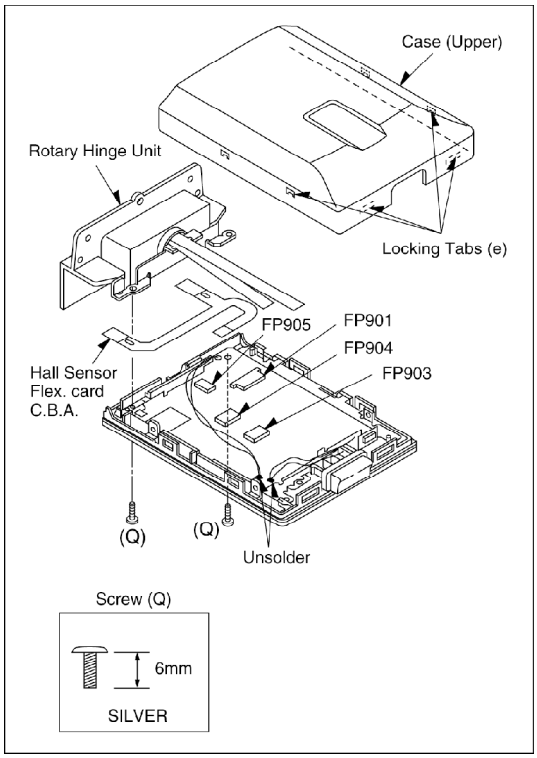

Case (Upper)
Rotary Hinge Unit
Locking Tabs (e)
FP905
FP901
FP904
FP903
Hall Sensor
Flex. card
C.B.A.
(Q)
(Q)
Unsolder
Screw (Q)
6mm
SILVER

Fig. 5-3

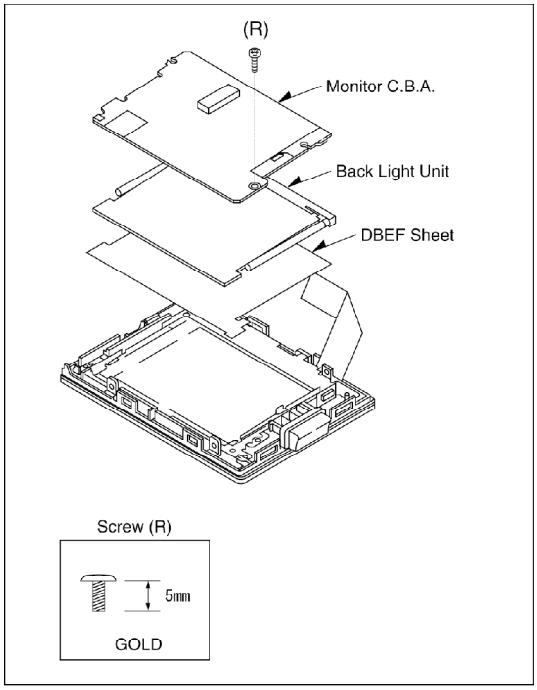


Fig. 6-1

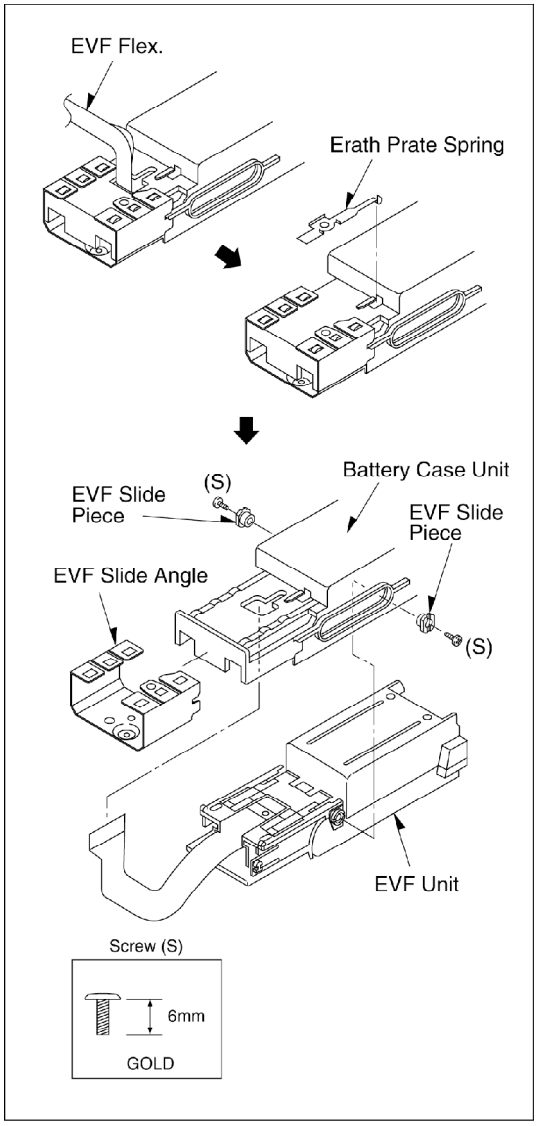

EVF Flex.
Erath Prate Spring
Battery Case Unit
(S)
EVF Slide Piece
EVF Slide Piece
EVF Slide Angle
(S)
EVF Unit
Screw (S)
6mm
GOLD

Fig. 6-2

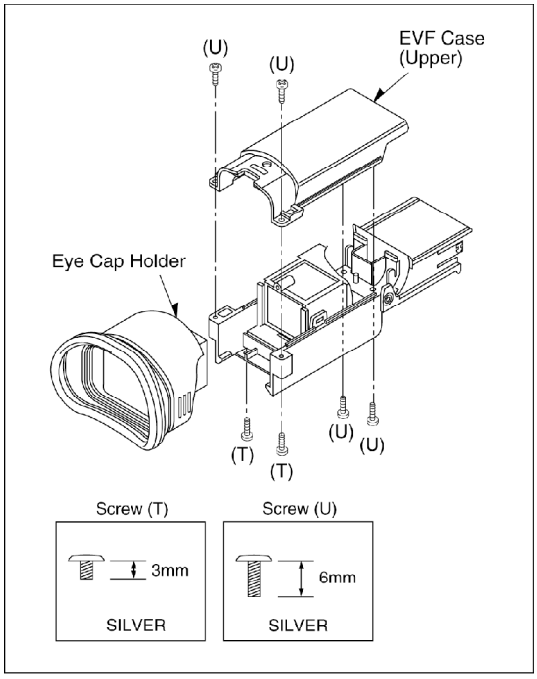

(U)
(U)
EVF Case
(Upper)
Eye Cap Holder
(T)
(T)
(U)
(U)
Screw (T)
3mm
SILVER
Screw (U)
6mm
SILVER

Fig. 6-3

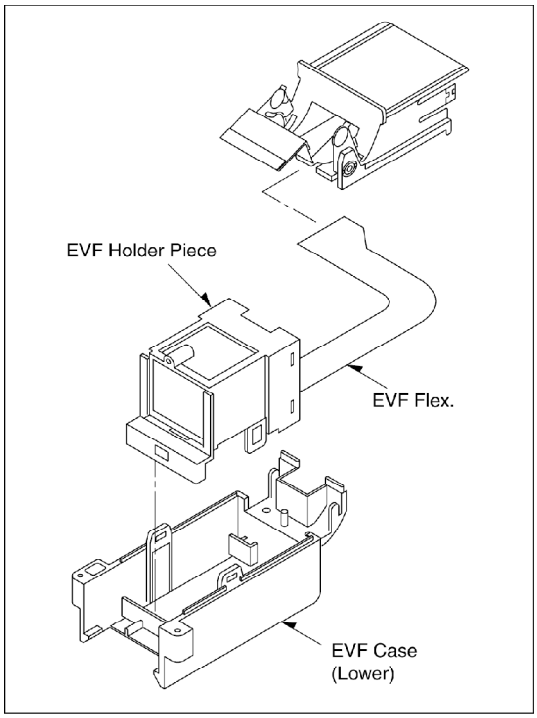

EVF Holder Piece
EVF Flex.
EVF Case
(Lower)

Fig. 6-4

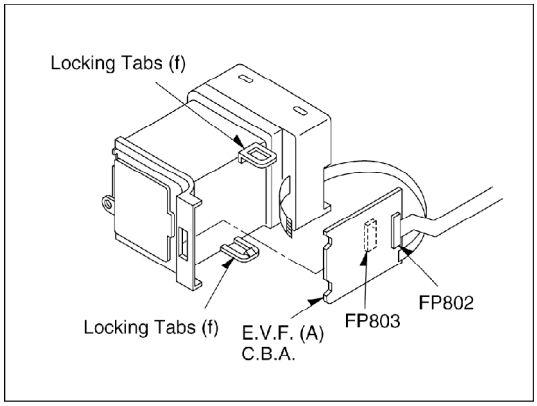
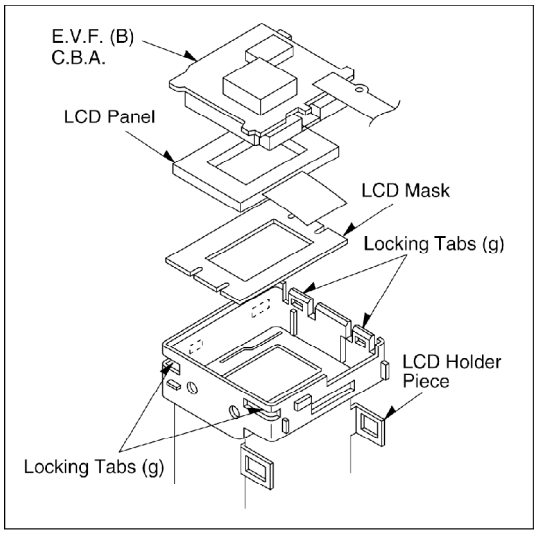


Fig. 6-5



8.3. DISASSEMBLY PROCEDURES OF CAMERA LENS UNIT

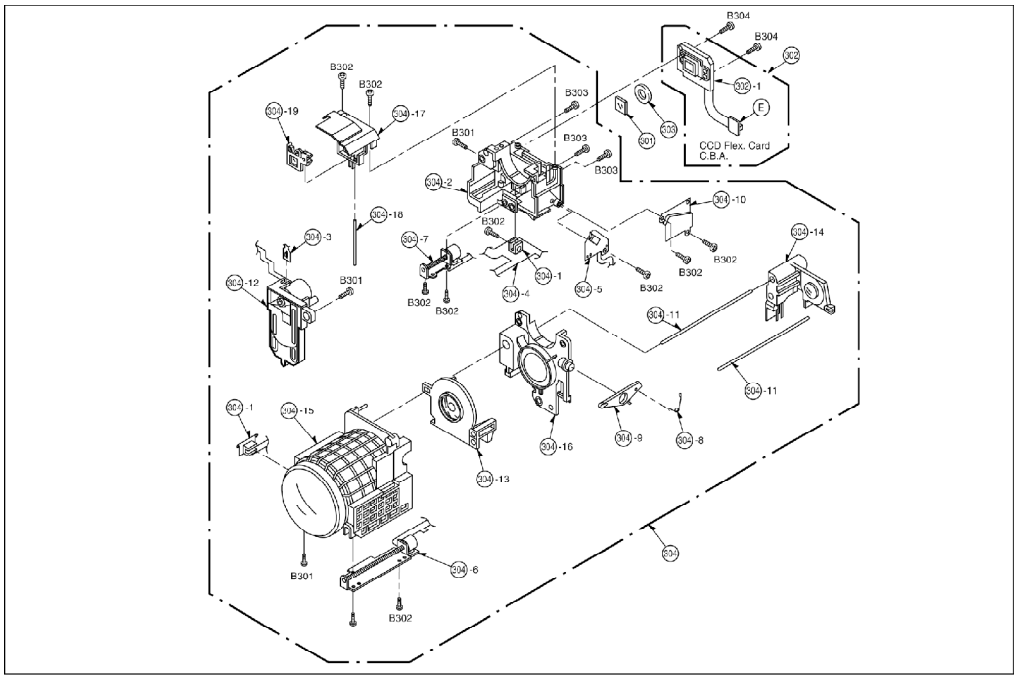
The following flowchart describes order or steps for removing the Camera lens unit and certain printed circuit boards in order to make access to the item needing service. / To reassemble the unit follow the steps in reverse order.

Fig. L1

1. CCD Unit	Ref.-No. 302
2. CCD Cushion & Crystal Filter	Ref.-No. 301/303
3. Protect Sheet & Lever	Ref.-No. 304-9/304-10
4. F Fix frame & F Frame Unit	Ref.-No. 304-17/304-19
5. Zoom Motor Unit	Ref.-No. 304-6
6. Focus Motor Unit	Ref.-No. 304-7
7. Flat Card Cable	Ref.-No. 304-4
8. Master Flange & Iris Unit	Ref.-No. 304-12/304-2
9. 3rd Lens Frame Unit	Ref.-No. 304-16
10. 4TH Moving Frame Unit	Ref.-No. 304-14
11. 2nd Moving Frame Unit	Ref.-No. 304-13
12. Guide Pole	Ref.-No. 304-11

Note 1:
Each Ref-numbers are equivalant to number of Fig. L1 and Parts List.

Fig. L2



9. ABBREVIATIONS

10. WAVEFORM TABLE

11. SCHEMATIC DIAGRAMS

11.1. OVERALL SCHEMATIC DIAGRAM

11.2. INTERCONNECTION SCHEMATIC DIAGRAM

11.3. POWER SCHEMATIC DIAGRAM

11.4. MIC UNIT SCHEMATIC DIAGRAM

11.5. MONIITOR& HALL SENSOR FLEX. CARD SCHEMATIC DIAGRAM

11.6. E.V.F. (A)& E.V.F. (B) SCHEMATIC DIAGRAM

11.7. FRONT JACK SCHEMATIC DIAGRAM

11.8. SIDE CASE (R) OPERATION SCHEMATIC DIAGRAM / (Included in Side Case (R) U.)

11.9. REAR OPERATION SCHEMATIC DIAGRAM / (Included in Rear Case U.)

11.10. CCD FLEX. CARD SCHEMATIC DIAGRAM

11.11. CASSETTE DOWN FLEX. CARD SCHEMATIC DIAGRAM

12. CIRCUIT BOARD ASSEMBLIES

12.1. POWER C.B.A.

12.1.1. POWER C.B.A. ADDRESS INFORMATION

12.2. E.V.F. (A) C.B.A.

12.3. E.V.F. (B) C.B.A.

12.4. MIC UNIT

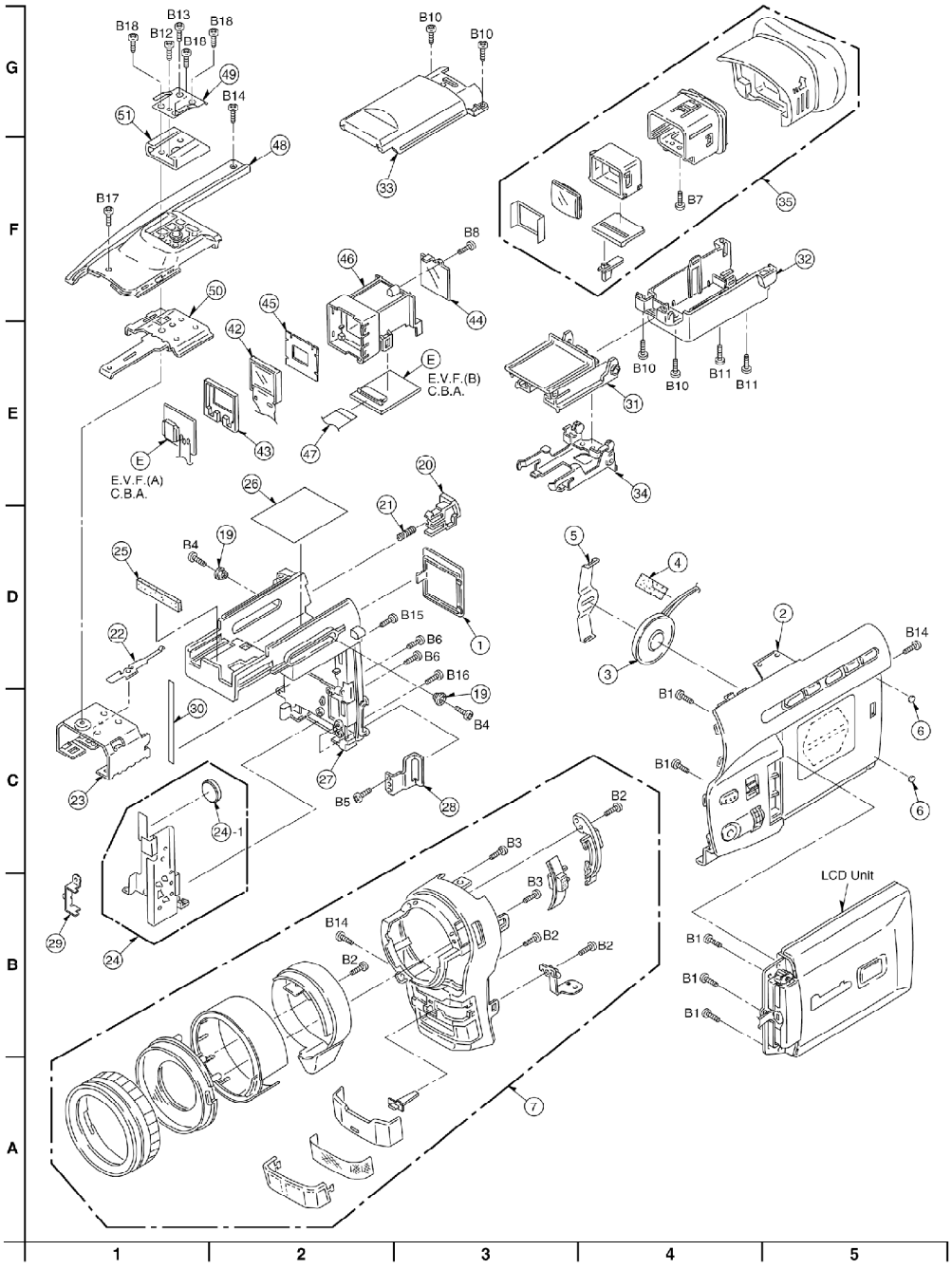
12.5. MONITOR C.B.A.

12.5.1. MONITOR C.B.A. ADDRESS INFORMATION

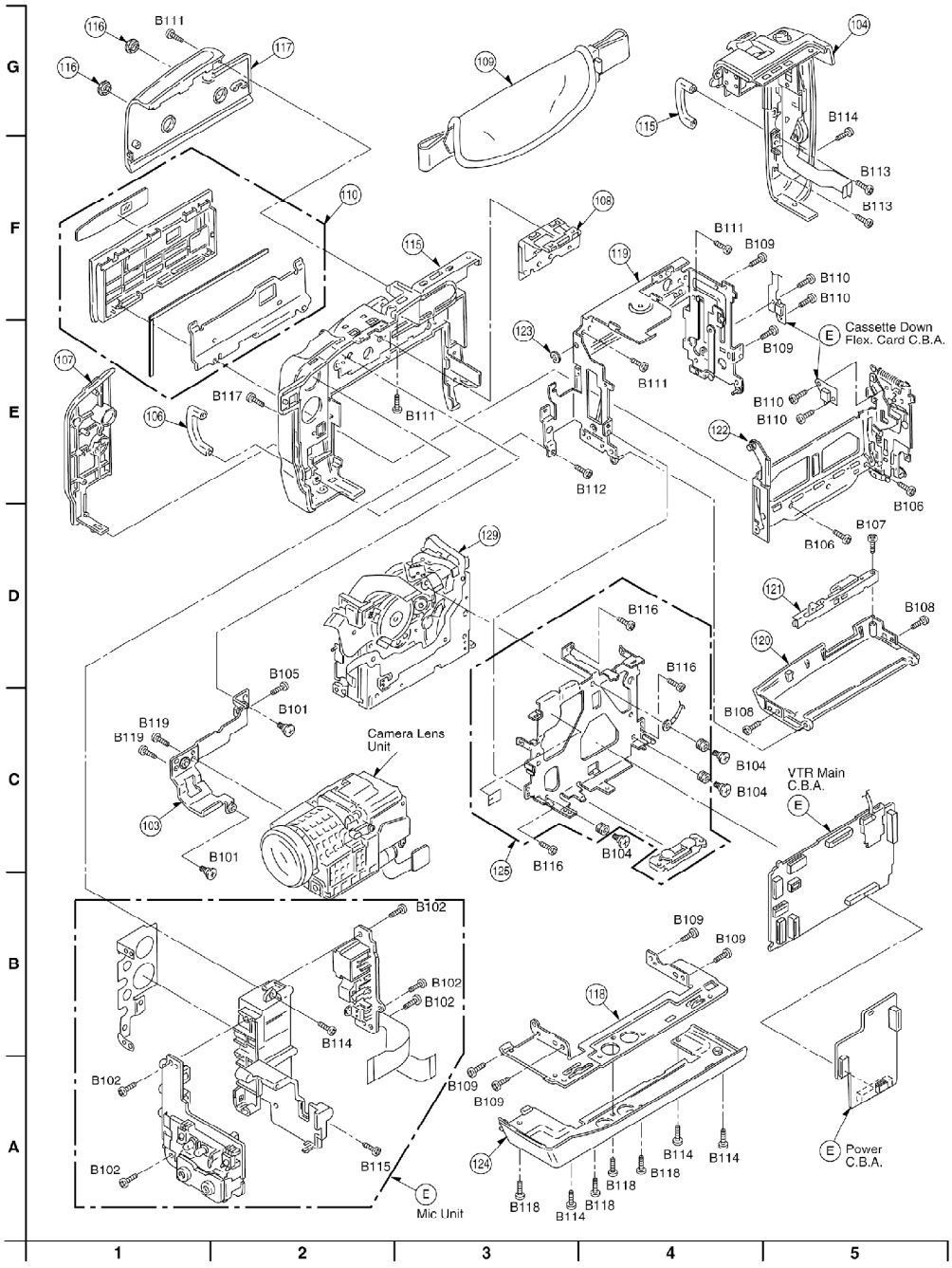
12.6. CCD FLEX. CARD C.B.A.

13. EXPLODED VIEWS

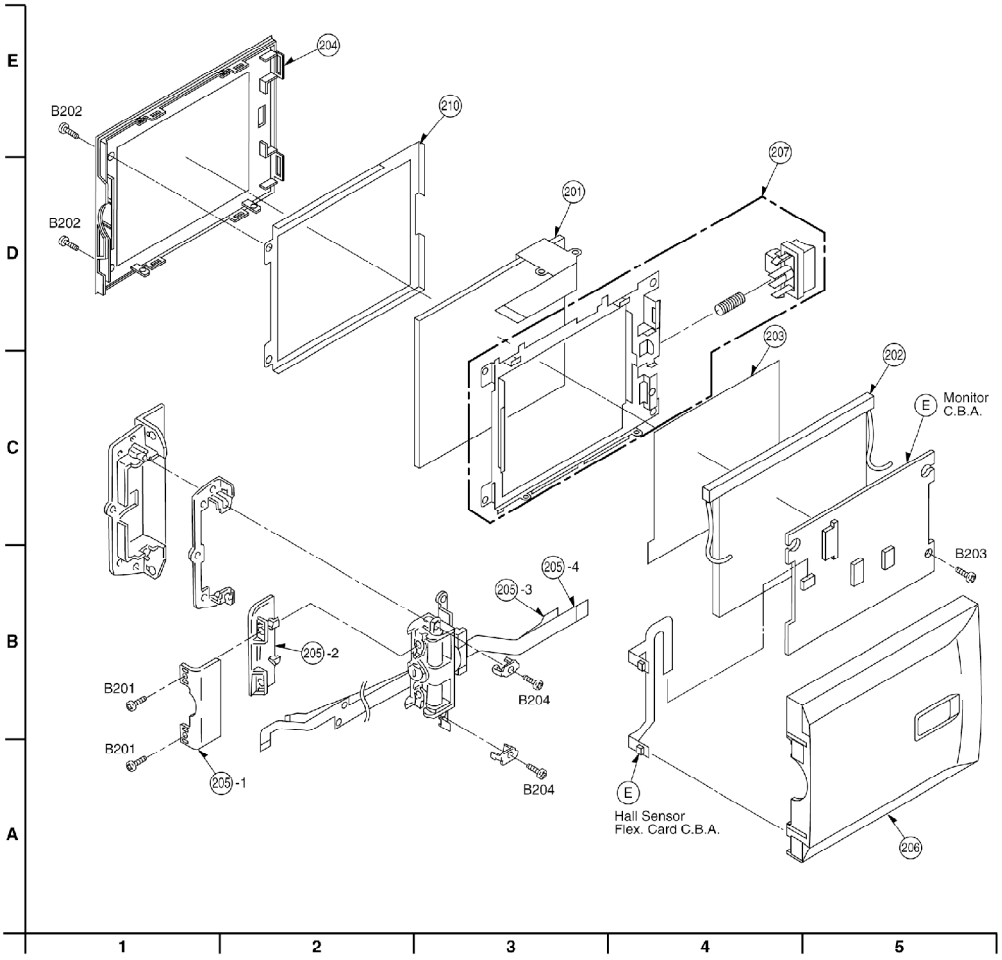
13.1. FRAME& CASING SECTION (1)



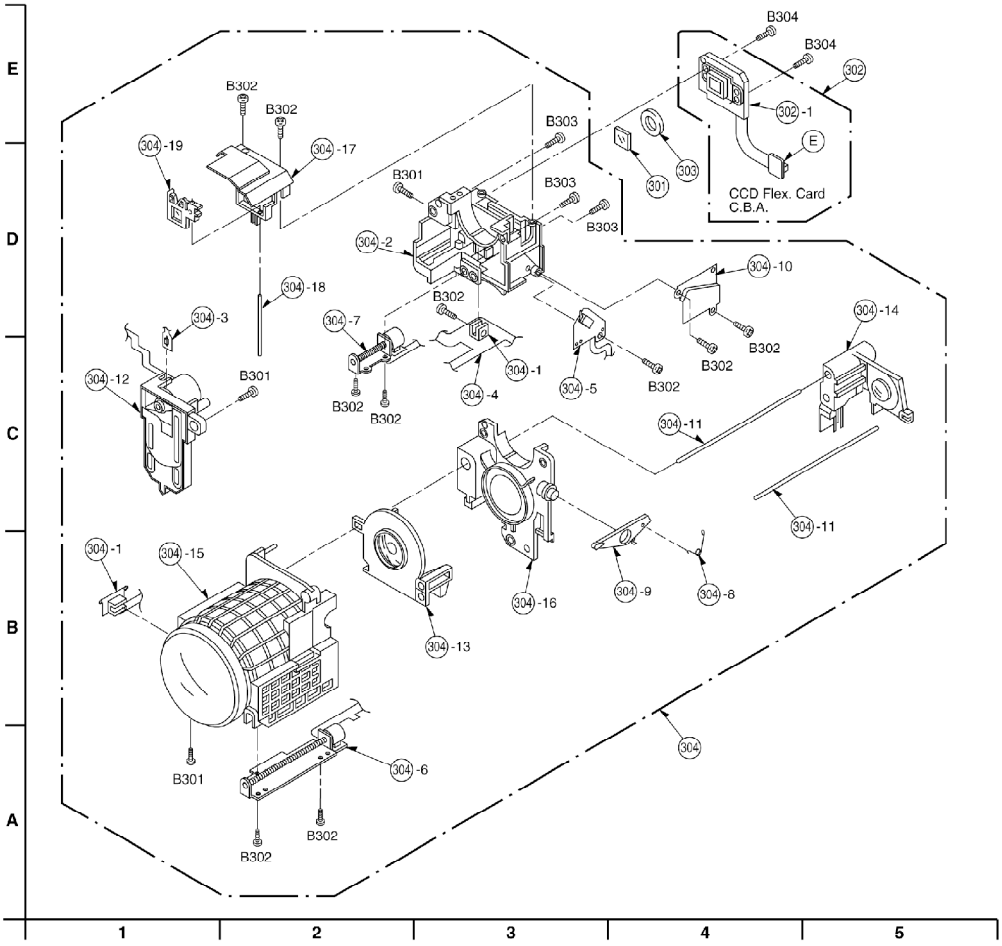
13.2. FRAME& CASING SECTION (2)



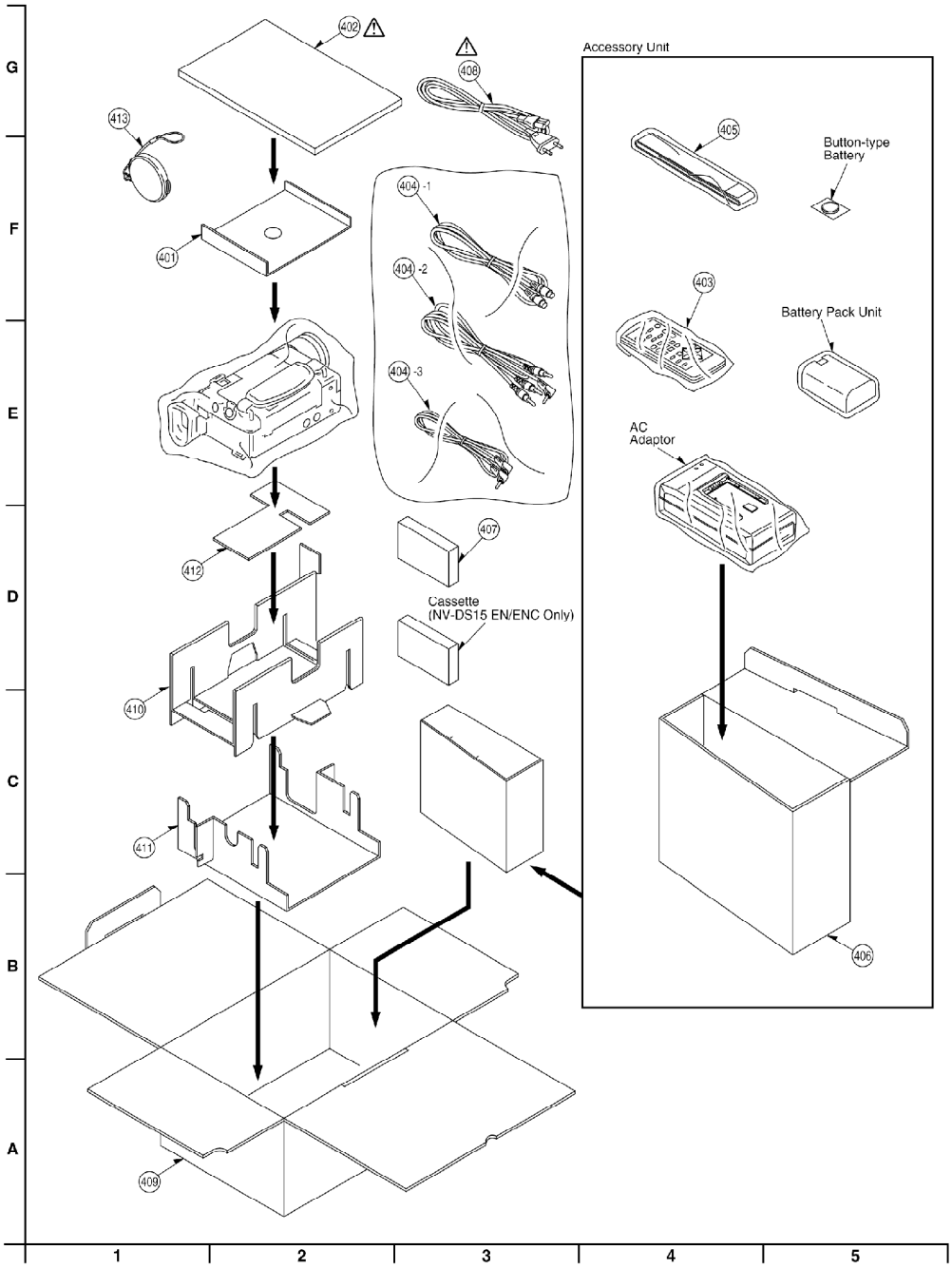
13.3. LCD SECTION



13.4. CAMERA LENS SECTION



13.5. PACKING PARTS& ACCESSORIES SECTION



14. REPLACEMENT PARTS LIST

14.1. FRAME& CASING SECTION (1) PARTS LIST

Ref. No.	Part No.	Part Name& Description	Pcs	Remarks
1 (1)	VKF3240	EVF COVER	1	
2 (1)	N9ZZ00000028	SIDE CASE (R) U.	1	
3 (1)	VEK8948	SPEAKER U.	1	
4 (1)	VGQ3457	BARRIER	1	
5 (1)	VMC1575	SPEAKER FIXING SPRING	1	
6 (1)	VMG1158	PROTECT RUBBER	2	
7 (1)	VYK9507	FRONT CASE U.	1	
19 (1)	VGQ5789	EVF SLIDE ANGLE	2	
20 (1)	VGU8537	BATTERY LOCK BUTTON	1	
21 (1)	VMB3210	BATTERY LOCK SPRING	1	
22 (1)	VMC1635	EARTH PLATE	1	
23 (1)	VMP6356	EVF SLIDE CASE ANGLE	1	
24 (1)	VEK9047	POWER FLEX.	1	
24-1 (1)	ML920S	LITHIUM BATTERY	1	
25 (1)	VGQ5923	EVF CUSHION	1	
26 (1)	VGQ5924	EVF SLIDE SHEET	1	
27 (1)	VKM5401	BATTERY CASE	1	
28 (1)	VMP6403	SHOULDER BELT ANGLE	1	
29 (1)	VMP6406	DC JACK FIXING ANGLE	1	
30 (1)	VGQ5806	PROTECT SHEET	1	
31 (1)	VGQ5756	EVF HINGE COVER	1	
32 (1)	VKM5402	EVF CASE (LOWER)	1	
33 (1)	VKM5403	EVF CASE (UPPER)	1	
34 (1)	VXA6715	EVF HINGE U.	1	
35 (1)	VYQ9509	EYE CAP HOLDER U.	1	
42 (1)	ALP022AXX	EVF LCD PANEL	1	
43 (1)	VGQ5444	BACK LIGHT HOLDER	1	
44 (1)	VGQ5493	EVF PROTECT PANEL	1	
45 (1)	VGQ5755	LCD MASK	1	
46 (1)	VJF1405	LCD HOLD PIECE	1	
47 (1)	VWJ1401	EVF FLEX.	1	
48 (1)	VKM5397	TOP CASE	1	
49 (1)	VMC1372	SHOE SPRING	1	
50 (1)	VMP6355	TOP FRAME	1	
51 (1)	VMP6366	SHOE	1	
B1 (1)	XQN2+BJ6	SCREW	5	
B2 (1)	XQN16+BJ5	SCREW	4	
B3 (1)	XQN16+BJ6FZ	SCREW	2	
B4 (1)	VHD1370	SCREW	2	
B5 (1)	XQN16+BJ3FN	SCREW	1	
B6 (1)	XQN16+B5FZ	SCREW	2	
B8 (1)	XQN16+BJ4FZ	SCREW	1	
B9 (1)	XQN16+BJ3FN	SCREW	2	
B10 (1)	XQN16+BJ6FN	SCREW	4	
B11 (1)	XQN16+BJ3FN	SCREW	2	
B12 (1)	XQN2+B2FN	SCREW	1	
B13 (1)	XQS2+A55FN	SCREW	1	
B14 (1)	XQN16+BJ6FN	SCREW	3	
B15 (1)	XQN16+BJ6FZ	SCREW	1	
B16 (1)	XQN16+BJ8FZ	SCREW	1	
B17 (1)	XQN16+B5FN	SCREW	1	
B18 (1)	XQS2+A6FN	SCREW	3	

14.2. FRAME& CASING SECTION (2) PARTS LIST

Ref. No.	Part No.	Part Name& Description	Pcs	Remarks
103 (2)	VYQ1914	LENS FRAME U.	1	
104 (2)	N9ZZ00000034	REAR CASE U.	1	
105 (2)	VGQ5669	GRIP BELT PIECE (A)	1	
106 (2)	VGQ5754	GRIP BELT PIECE (B)	1	
107 (2)	VKF3239	JACK COVER	1	
108 (2)	VMC1631	MMC CLICK PLATE	1	
109 (2)	VYC0833	GRIP BELT	1	
110 (2)	VYK9513	CASSETTE COVER U.	1	
115 (2)	VYK9522	SIDE CASE (L)(1) U.	1	
116 (2)	VKF2971	MECHA. ADJ. PIECE	2	
117 (2)	VKM5398	GRIP PIECE	1	
118 (2)	VMP6359	BOTTOM FRAME	1	
119 (2)	VXA6637	OUT HOLDER	1	
120 (2)	VGP5292	BOTTOM COVER	1	
121 (2)	VXU1565	BOTTOM COVER LOCK U.	1	
122 (2)	VYQ1915	MAIN FRAME (1) U.	1	
123 (2)	XUC2FP	RING	1	
124 (2)	VYK9519	BOTTOM CASE U.	1	
125 (2)	VYQ1916	MECHA. FRAME U.	1	
129 (2)	VXY1577-K	MECHA. U.	1	
B101 (2)	VHD1401	SCREW	2	
B102 (2)	XQN16+BJ4FN	SCREW	5	
B103 (2)	VMS5604	SCREW	2	
B104 (2)	VHD1133	SCREW	3	
B105 (2)	VHD1401	SCREW	1	
B106 (2)	VHD1365	SCREW	2	
B107 (2)	XQN16+BJ4FZ	SCREW	1	
B108 (2)	XQN14+A16FZ	SCREW	2	
B109 (2)	XQN16+B2FN	SCREW	6	
B110 (2)	XQN14+B12	SCREW	4	
B111 (2)	XQN16+BJ5FZ	SCREW	4	
B112 (2)	XQN16+BJ6	SCREW	1	
B113 (2)	XQN16+BJ8FZ	SCREW	2	
B114 (2)	XQN16+BJ6FZ	SCREW	5	
B115 (2)	XQN16+BJ8FZ	SCREW	1	
B116 (2)	XQN16+B3FN	SCREW	3	
B117 (2)	XQN16+B5FZ	SCREW	1	
B118 (2)	XQN16+B6FZ	SCREW	4	
B119 (2)	XQN2+BJ5	SCREW	2	

14.3. LCD SECTION PARTS LIST

Ref. No.	Part No.	Part Name& Description	Pcs	Remarks
201 (3)	EDTCA29QB0	MONITOR LCD PANEL	1	
202 (3)	VEK8992	BACK LIGHT U.	1	
203 (3)	VGL0892	DBEF SHEET	1	
204 (3)	VKM5391	LCD CASE (LOWER)	1	
205-1(3)	VGQ5791	HINGE COVER (UPPER)	1	
205-2(3)	VGQ5792	HINGE COVER (LOWER)	1	
205-3(3)	VWJ1399	MONITOR FLEX.(SIGNAL)	1	
205-4(3)	VWJ1400	MONITOR FLEX.(POWER)	1	
206 (3)	VYK9517	LCD CASE (UPPER) U.	1	NV-DS15EG/B/ EGM/EN/ENC/A
206 (3)	VYK9535	LCD CASE (UPPER) U.	1	NV-DS150EG/B
207 (3)	VYQ1971	LCD FRAME U.	1	
210 (3)	VYQ2002	LCD SHIELD CASE U.	1	
B201 (3)	XQN2+BF35	SCREW	2	
B202 (3)	XQN16+BJ6FN	SCREW	2	
B203 (3)	XQN16+B3FN	SCREW	1	
B204 (3)	XQN2+BJ8	SCREW	2	

14.4. CAMERA LENS SECTION PARTS LIST

Ref. No.	Part No.	Part Name& Description	Pcs	Remarks
301 (4)	VDL1125	CRYSTAL FILTER	1	
302 (4)	VEK9041	CCD U.	1	
302-1 (4)	VMA9870	CCD FIXING PLATE	1	
303 (4)	VMX2942	CCD CUSHION	1	
304 (4)	VXW0485	LENS U.	1	
304-1 (4)	0N1004-R	PHOTO INTERRUPTER	2	
304-2 (4)	VDW0670	MASTER FLANGE	1	
304-3 (4)	HT-120B	HALL SENSOR	1	
304-4 (4)	VJB20823	FLAT CARD CABLE	1	
304-5 (4)	VSP1083	DETECTION SW	1	
304-6 (4)	VEM0712	ZOOM MOTOR U.	1	
304-7 (4)	VEM0713	FOCUS MOTOR U.	1	
304-8 (4)	VMB3392	F SPRING	1	
304-9 (4)	VML3486	LEVER	1	
304-10(4)	VMP6163	PROTECT SHEET	1	
304-11(4)	VMS6714	GUIDE POLE	2	
304-12(4)	VXL3026	IRIS U.	1	
304-13(4)	VXP1983	2ND MOVING FRAME U.	1	
304-14(4)	VXP1986	4TH MOVING FRAME U.	1	
304-15(4)	VXQ0884	MAIN FRAME U.	1	
304-16(4)	VXQ0885	3RD LENS FRAME U.	1	
304-17(4)	VDW0672	F FIX FRAME	1	
304-18(4)	VMS6494	F GUIDE POLE	1	
304-19(4)	VXQ0886	F FRAME U.	1	
B301 (4)	VHD0852	SCREW	3	
B302 (4)	XQN16+CJ5	SCREW	10	
B303 (4)	XQN16+CJ8	SCREW	3	
B304 (4)	XQN16+CJ6	SCREW	2	

14.5. PACKING PARTS& ACCESSORIES SECTION PARTS LIST

Ref. No.	Part No.	Part Name& Description	Pcs	Remarks
401 (5)	VPN5399	SPACER PAD	1	
402 (5)	VQT8740	OPERATING INSTRUCTIONS	1	NV-DS15EG ⚠
		(GERMAN, FRENCH)		
402 (5)	VQT8741	OPERATING INSTRUCTIONS	1	NV-DS15EGM ⚠
		(DUTCH, DANISH)		
402 (5)	VQT8744	OPERATING INSTRUCTIONS	1	NV-DS15B, NV-DS150B ⚠
		(ENGLISH)		
402 (5)	VQT8742	OPERATING INSTRUCTIONS	1	NV-DS15EG, NV-DS150EG ⚠
		(ITALIAN, ENGLISH)		
402 (5)	VQT8743	OPERATING INSTRUCTIONS	1	NV-DS15EG, NV-DS150EG ⚠
		(SPANISH, SWEDISH)		
402 (5)	VQT8745	OPERATING INSTRUCTIONS	1	NV-DS15EN/ENC/A ⚠
		(ENGLISH, CHINESE)		
402 (5)	VQT8746	OPERATING INSTRUCTIONS	1	NV-DS15EN/ENC/A ⚠
		(ARABIC, RUSSIAN)		
403 (5)	VEQ2398	REMOTE CONTROLLER	1	NV-DS15EG/B/EGM
403 (5)	VEQ2405	REMOTE CONTROLLER	1	NV-DS15EN/ENC/A
				NV-DS150EG/B
404-1(5)	VJA1220	S-VIDEO CABLE	1	
404-2(5)	K2KC4CB00001	AV CABLE	1	
404-3(5)	VJA1288	DV CABLE	1	
405 (5)	VFC3299	SHOULDER BELT	1	
406 (5)	VPN5400	ACCESSORIES BOX	1	
407 (5)	VFK1451	HEAD CLEANER	1	
408 (5)	VJA0664	AC CORD	1	NV-DS15EG/EGM/ENC ⚠
				NV-DS150EG
408 (5)	VJA0940	AC CORD	1	NV-DS15B/EN ⚠
				NV-DS150B
408 (5)	VJA0754	AC CORD	1	NV-DS15A ⚠
409 (5)	VPK2349	PACKING	1	NV-DS15EG
409 (5)	VPK2382	PACKING	1	NV-DS15B
409 (5)	VPK2381	PACKING	1	NV-DS15EGM
409 (5)	VPK2350	PACKING	1	NV-DS15EN
409 (5)	VPK2351	PACKING	1	NV-DS15ENC
409 (5)	VPK2391	PACKING	1	NV-DS15A
409 (5)	VPK2360	PACKING	1	NV-DS150EG
409 (5)	VPK2383	PACKING	1	NV-DS150B
410 (5)	VPN5402	CUSHION (UPPER)	1	
411 (5)	VPN5403	CUSHION (LOWER)	1	
412 (5)	VPN5438	PAD	1	

Ref. No.	Part No.	Part Name& Description	Pcs	Remarks
413 (5)	VYF2700	HOOD CAP U.	1	

14.6. ELECTRICAL REPLACEMENT PARTS LIST

Ref. No.	Part No.	Part Name& Description	Pcs	Remarks
■	VEP03F47A	VTR MAIN C.B.A.	1	(RTL) NV-DS15EG/B/EGM
				NV-DS150B
■	VEP03F47B	VTR MAIN C.B.A.	1	(RTL) NV-DS15EN/ENC/A
				NV-DS150EG
■	VEP01869A	POWER C.B.A.	1	(RTL)
■	VEK9045	MIC U.	1	
■	VEP26239A	MONITOR C.B.A.	1	(RTL)
■	VEP28276A	E.V.F.(A) C.B.A.	1	(RTL)
■	VEP28277A	E.V.F.(B) C.B.A.	1	(RTL)
■	VEP22301A	CCD FLEX. CARD C.B.A.	1	(RTL)
■	VEK9040	LENS FLEX. CARD C.B.A.	1	(RTL)
■	VEP06D81A	HALL SENSOR FLEX. CARD	1	(RTL)
■	VEP06D73A	CASSETTE DET. FLEX. CARD	1	(RTL)
■	VEP03F47A	VTR MAIN C.B.A.		(RTL) NV-DS15EG/B/EGM
				NV-DS150B
■	VEP03F47B	VTR MAIN C.B.A.		(RTL) NV-DS15EN/ENC/A
				NV-DS150EG
FP601	VJS4322A020	CONNECTOR (FEMALE) 20P	1	
FP701	VJS3930B021	CONNECTOR (FEMALE) 21P	1	
FP801	VJS3498A026	CONNECTOR (FEMALE) 26P	1	

Ref. No.	Part No.	Part Name& Description	Pcs	Remarks
FP2201	VJS3930B018	CONNECTOR (FEMALE) 18P	1	
FP2202	VJS4274B010	CONNECTOR (FEMALE) 10P	1	
FP2203	VJS3931B018	CONNECTOR (FEMALE) 18P	1	
FP2204	VJS3930B008	CONNECTOR (FEMALE) 8P	1	
FP4801	VJS3971B039	CONNECTOR (FEMALE) 39P	1	
FP5001	VJS3931B008	CONNECTOR (FEMALE) 8P	1	
FP6301	VJS3930B015	CONNECTOR (FEMALE) 15P	1	
FP6302	VJS3498A017	CONNECTOR (FEMALE) 17P	1	
FP6303	VJS3930B006	CONNECTOR (FEMALE) 6P	1	
PP201	VJP3358C014	CONNECTOR (MALE) 14P	1	
PP3001	VJP3884B060	CONNECTOR (MALE) 60P	1	
PS1001	VJS3989A080	CONNECTOR (FEMALE) 80P	1	
■	VEP01869A	POWER C.B.A.	1	(RTL)
C1001	ECUM1C106VBP	C.CAPACITOR CH 16V 10U	1	
C1003	ECUM1C106VBP	C.CAPACITOR CH 16V 10U	1	
C1005	ECUM1A335KBN	C.CAPACITOR CH 10V 3.3U	1	
C1011	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	1	
C1012	ECUM1A335KBN	C.CAPACITOR CH 10V 3.3U	1	
C1013	ECUX1E331KBQ	C.CAPACITOR CH 25V 330P	1	
C1014	ECUX1C223KBQ	C.CAPACITOR CH 16V 0.022U	1	
C1016	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C1018	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C1021	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	1	
C1022	ECUM1A335KBN	C.CAPACITOR CH 10V 3.3U	1	
C1023	ECUX1E331KBQ	C.CAPACITOR CH 25V 330P	1	
C1024	ECUX1C223KBQ	C.CAPACITOR CH 16V 0.022U	1	
C1025	ECST0JY106Z	T.CAPACITOR CH 6.3V 10U	1	
C1026	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C1027	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C1029	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C1031	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	1	
C1032	ECUM1A335KBN	C.CAPACITOR CH 10V 3.3U	1	
C1033	ECUX1E562KBQ	C.CAPACITOR CH 25V 5600P	1	
C1034	ECUX1C223KBQ	C.CAPACITOR CH 16V 0.022U	1	
C1035	ECST0JY226Z	T.CAPACITOR CH 6.3V 22U	1	
C1036	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C1037	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C1038	ECST0JY226Z	T.CAPACITOR CH 6.3V 22U	1	
C1039	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C1041	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	1	
C1042	ECUM1A335KBN	C.CAPACITOR CH 10V 3.3U	1	
C1043	ECUX1H470JCQ	C.CAPACITOR CH 50V 47P	1	
C1044	ECUX1C223KBQ	C.CAPACITOR CH 16V 0.022U	1	
C1045	ECST0JY106Z	T.CAPACITOR CH 6.3V 10U	1	
C1046	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C1052	ECUM1E105KBM	C.CAPACITOR CH 25V 1U	1	
C1053	ECUX1E222KBQ	C.CAPACITOR CH 25V 2200P	1	
C1054	ECUX1C223KBQ	C.CAPACITOR CH 16V 0.022U	1	

C1054	ECCX1C223KBQ	CAP CER 0.022UF 16V X7R	1	

Ref. No.	Part No.	Part Name& Description	Pcs	Remarks
C1055	ECUM1C106VBP	C.CAPACITOR CH 16V 10U	1	
C1056	ECUM1E105KBM	C.CAPACITOR CH 25V 1U	1	
C1057	ECUM1E105KBM	C.CAPACITOR CH 25V 1U	1	
C1063	ECUM1A225KBN	C.CAPACITOR CH 10V 2.2U	1	
C1064	ECUM1A225KBN	C.CAPACITOR CH 10V 2.2U	1	
C1065	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C1066	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C1085	ECUM1C106VBP	C.CAPACITOR CH 16V 10U	1	
C1086	ECUM1E105KBM	C.CAPACITOR CH 25V 1U	1	
C1087	ECUM1E105KBM	C.CAPACITOR CH 25V 1U	1	
C1101	ECUX1H101JCQ	C.CAPACITOR CH 50V 100P	1	
C1102	ECUX1A334KBV	C.CAPACITOR CH 10V 0.33U	1	
C1103	ECUX1A473KBQ	C.CAPACITOR CH 10V 0.047U	1	
C1104	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	1	
C1105	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C1106	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	1	
C1107	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C1108	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C1111	ECUX1H332KBV	C.CAPACITOR CH 50V 3300P	1	
C1112	ECUX1E102KBQ	C.CAPACITOR CH 25V 1000P	1	
C1113	ECUX1H151JCQ	C.CAPACITOR CH 50V 150P	1	
C1114	ECUX1H390JCQ	C.CAPACITOR CH 50V 39P	1	
C1119	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C1121	ECUX1H472KBV	C.CAPACITOR CH 50V 4700P	1	
C1122	ECUX1E682KBQ	C.CAPACITOR CH 25V 6800P	1	
C1123	ECUX1H151JCQ	C.CAPACITOR CH 50V 150P	1	
C1124	ECUX1H390JCQ	C.CAPACITOR CH 50V 39P	1	
C1125	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C1128	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C1129	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C1131	ECUX1H472KBV	C.CAPACITOR CH 50V 4700P	1	
C1132	ECUX1E331KBQ	C.CAPACITOR CH 25V 330P	1	
C1133	ECUX1H151JCQ	C.CAPACITOR CH 50V 150P	1	
C1134	ECUX1H390JCQ	C.CAPACITOR CH 50V 39P	1	
C1141	ECUX1A154KBV	C.CAPACITOR CH 10V 0.15U	1	
C1142	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C1143	ECUX1H151JCQ	C.CAPACITOR CH 50V 150P	1	
C1144	ECUX1H390JCQ	C.CAPACITOR CH 50V 39P	1	
C1150	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C1151	ECUX1H822KBV	C.CAPACITOR CH 50V 8200P	1	
C1152	ECUX1C822KBQ	C.CAPACITOR CH 16V 8200P	1	
C1153	ECUX1H151JCQ	C.CAPACITOR CH 50V 150P	1	
C1154	ECUX1H820JCQ	C.CAPACITOR CH 50V 82P	1	
C1155	ECUM0J225KBN	C.CAPACITOR CH 6.3V 2.2U	1	
C1156	ECST0JY106Z	T.CAPACITOR CH 6.3V 10U	1	
C1301	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
D1051	SB05-05CP	DIODE	1	
D1052	MA111	DIODE	1	
D1082	MA111	DIODE	1	
D1101	MA8120-L	DIODE	1	
D1151	MA8160-M	DIODE	1	
D1152	MA111	DIODE	1	
D1301	1SS388	DIODE	1	

Ref. No.	Part No.	Part Name& Description	Pcs	Remarks
FL1001	VLF1378	FILTER	1	
FP602	VJS3931B016	CONNECTOR (FEMALE) 16P	1	
FP1001	VJS4322A020	CONNECTOR (FEMALE) 20P	1	
IC1001	BA9734AKV	IC	1	
IC1002	NJM2406F	IC	1	
IP1001	VSF0233F31	IC PROTECTOR	1	⚠
L1001	VLQ0900M4R7	COIL 4.7UH	1	
L1011	VLQ0902M470	COIL 47UH	1	
L1012	VLQ0900M4R7	COIL 4.7UH	1	
L1014	VLQ0888K100	COIL 10UH	1	
L1016	VLQ0888K100	COIL 10UH	1	
L1021	VLQ0900M150	COIL 15UH	1	
L1022	VLQ0900M4R7	COIL 4.7UH	1	
L1023	VLQ0888M4R7	COIL 4.7UH	1	
L1025	VLQ0780K100	COIL 10UH	1	
L1026	VLQ0888K100	COIL 10UH	1	
L1028	VLQ0888K100	COIL 10UH	1	
L1029	VLQ0888K100	COIL 10UH	1	
L1031	VLQ0902M101	COIL 100UH	1	
L1032	VLQ0900M4R7	COIL 4.7UH	1	
L1033	VLQ0888K100	COIL 10UH	1	
L1034	VLQ0464K100	COIL 10UH	1	
L1041	VLQ0900M150	COIL 15UH	1	
L1042	VLQ0900M4R7	COIL 4.7UH	1	
L1051	VLQ0888K221	COIL 220UH	1	
L1052	VLQ0780K100	COIL 10UH	1	
L1061	VLQ0902M330	COIL 33UH	1	
L1062	VLQ0827M101	COIL 100UH	1	
L1081	VLQ0888K221	COIL 220UH	1	
L1082	VLQ0780K100	COIL 10UH	1	
L1301	VLQ0807K220	COIL 22UH	1	
LB1001	VLP0332A420	CHIP BEAD	1	
P1001	VJP3172B002	CONNECTOR (MALE) 2P	1	
P4201	VJP3172B002	CONNECTOR (MALE) 2P	1	
PP1001	VJP3989A080	CONNECTOR (MALE) 80P	1	
Q1011	FP102	TRANSISTOR	1	
Q1021	FP102	TRANSISTOR	1	
Q1022	2SK2151	TRANSISTOR	1	
Q1031	FP102	TRANSISTOR	1	
Q1041	FP102	TRANSISTOR	1	
Q1042	2SK2151	TRANSISTOR	1	
Q1051	2SB798A	TRANSISTOR	1	
Q1052	2SA1832FY	TRANSISTOR	1	
Q1053	2SD2216	TRANSISTOR	1	
Q1054	XP1401	TRANSISTOR-TRANSISTOR	1	

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name& Description	Pcs	Remarks
Q1055	2SC4738FY	TRANSISTOR	1	
Q1056	2SA1832FY	TRANSISTOR	1	
Q1057	XP1501	TRANSISTOR-TRANSISTOR	1	
Q1058	2SB1462-R	TRANSISTOR	1	
Q1061	FP102	TRANSISTOR	1	
Q1062	FP102	TRANSISTOR	1	
Q1083	2SD2216	TRANSISTOR	1	
Q1084	XP1401	TRANSISTOR-TRANSISTOR	1	
Q1101	2SA1832FY	TRANSISTOR	1	
Q1301	2SA1832FY	TRANSISTOR	1	
Q1302	2SA1832FY	TRANSISTOR	1	
Q1303	2SB1462-R	TRANSISTOR	1	
Q1304	XP1501	TRANSISTOR-TRANSISTOR	1	
QR1001	UN9111	TRANSISTOR-RESISTOR	1	
QR1004	UN9115	TRANSISTOR-RESISTOR	1	
QR1050	UN9213	TRANSISTOR-RESISTOR	1	
QR1082	UN9113	TRANSISTOR-RESISTOR	1	
QR1083	UN9213	TRANSISTOR-RESISTOR	1	
QR1101	UN9214J	TRANSISTOR-RESISTOR	1	
QR1301	UN9212	TRANSISTOR-RESISTOR	1	
QR1302	XP4314	TRANSISTOR	1	
R1003	ERJ2GEJ225	M.RESISTOR CH 1/16W 2.2M	1	
R1005	ERJ2GEJ103	M.RESISTOR CH 1/16W 10K	1	
R1008	ERJ2GEJ473	M.RESISTOR CH 1/16W 47K	1	
R1010	ERJ2RKD820	M.RESISTOR CH 1/16W 82	1	
R1011	ERJ6RBB682	M.RESISTOR CH 1/10W 6.8K	1	
R1012	ERJ2RKD820	M.RESISTOR CH 1/16W 82	1	
R1013	ERJ3RBD391	M.RESISTOR CH 1/16W 390	1	
R1014	ERJ6RBB272	M.RESISTOR CH 1/10W 2.7K	1	
R1015	ERJ2GEJ331	M.RESISTOR CH 1/16W 330	1	
R1020	ERJ2RKD820	M.RESISTOR CH 1/16W 82	1	
R1021	ERJ6RBB272	M.RESISTOR CH 1/10W 2.7K	1	
R1022	ERJ2RKD820	M.RESISTOR CH 1/16W 82	1	
R1023	ERJ3RBD361	M.RESISTOR CH 1/16W 360	1	
R1024	ERJ6RBB272	M.RESISTOR CH 1/10W 2.7K	1	
R1025	ERJ2GEJ331	M.RESISTOR CH 1/16W 330	1	
R1030	ERJ2RKD820	M.RESISTOR CH 1/16W 82	1	
R1031	ERJ6RBB332	M.RESISTOR CH 1/10W 3.3K	1	
R1032	ERJ2RKD820	M.RESISTOR CH 1/16W 82	1	
R1033	ERJ3RBD391	M.RESISTOR CH 1/16W 390	1	
R1034	ERJ6RBB272	M.RESISTOR CH 1/10W 2.7K	1	
R1035	ERJ2GEJ331	M.RESISTOR CH 1/16W 330	1	
R1040	ERJ2RKD820	M.RESISTOR CH 1/16W 82	1	
R1041	ERJ6RBB152	M.RESISTOR CH 1/10W 1.5K	1	
R1042	ERJ2RKD820	M.RESISTOR CH 1/16W 82	1	
R1043	ERJ3RBD511	M.RESISTOR CH 1/16W 510	1	
R1044	ERJ6RBB272	M.RESISTOR CH 1/10W 2.7K	1	
R1045	ERJ2GEJ331	M.RESISTOR CH 1/16W 330	1	
R1050	ERJ2RKD820	M.RESISTOR CH 1/16W 82	1	
R1051	ERJ6RBB273	M.RESISTOR CH 1/10W 27K	1	
R1052	ERJ2RKD820	M.RESISTOR CH 1/16W 82	1	
R1053	ERJ3RBD821	M.RESISTOR CH 1/16W 820	1	

Ref. No.	Part No.	Part Name& Description	Pcs	Remarks
R1054	ERJ6RBB272	M.RESISTOR CH 1/10W 2.7K	1	
R1055	ERJ2GEJ331	M.RESISTOR CH 1/16W 330	1	
R1057	ERJ2RHD103	M.RESISTOR CH 1/16W 10K	1	
R1058	ERJ2RHD751	M.RESISTOR CH 1/16W 750	1	
R1059	ERJ2RHD272	M.RESISTOR CH 1/16W 2.7K	1	
R1087	ERJ2RHD223	M.RESISTOR CH 1/16W 22K	1	
R1088	ERJ2RHD242	M.RESISTOR CH 1/16W 2.4K	1	
R1089	ERJ2RHD272	M.RESISTOR CH 1/16W 2.7K	1	
R1101	ERJ2RHD223	M.RESISTOR CH 1/16W 22K	1	
R1102	ERJ2GEJ472	M.RESISTOR CH 1/16W 4.7K	1	
R1103	ERJ2GEJ472	M.RESISTOR CH 1/16W 4.7K	1	
R1104	ERJ2GEJ123	M.RESISTOR CH 1/16W 12K	1	
R1105	ERJ2GEJ223	M.RESISTOR CH 1/16W 22K	1	
R1107	ERJ2GEJ225	M.RESISTOR CH 1/16W 2.2M	1	
R1108	ERJ2GEJ473	M.RESISTOR CH 1/16W 47K	1	
R1109	ERJ2GEJ103	M.RESISTOR CH 1/16W 10K	1	
R1111	ERJ2GEJ151	M.RESISTOR CH 1/16W 150	1	
R1112	ERJ2GEJ103	M.RESISTOR CH 1/16W 10K	1	
R1121	ERJ2GEJ151	M.RESISTOR CH 1/16W 150	1	
R1122	ERJ2GEJ682	M.RESISTOR CH 1/16W 6.8K	1	
R1131	ERJ2GEJ151	M.RESISTOR CH 1/16W 150	1	
R1132	ERJ2GEJ103	M.RESISTOR CH 1/16W 10K	1	
R1141	ERJ2GEJ151	M.RESISTOR CH 1/16W 150	1	
R1142	ERJ2GEJ103	M.RESISTOR CH 1/16W 10K	1	
R1151	ERJ2GEJ151	M.RESISTOR CH 1/16W 150	1	
R1152	ERJ2GEJ562	M.RESISTOR CH 1/16W 5.6K	1	
R1153	ERJ2RHD123	M.RESISTOR CH 1/16W 12K	1	
R1154	ERJ2RHD473	M.RESISTOR CH 1/16W 47K	1	
R1155	ERJ2GEJ221	M.RESISTOR CH 1/16W 220	1	
R1156	ERJ2GEJ332	M.RESISTOR CH 1/16W 3.3K	1	
R1157	ERJ2GEJ272	M.RESISTOR CH 1/16W 2.7K	1	
R1186	ERJ2GEJ332	M.RESISTOR CH 1/16W 3.3K	1	
R1187	ERJ2GEJ272	M.RESISTOR CH 1/16W 2.7K	1	
R1251	ERJ2GEJ683	M.RESISTOR CH 1/16W 68K	1	
R1252	ERJ2GEJ473	M.RESISTOR CH 1/16W 47K	1	
R1253	ERJ2GEJ473	M.RESISTOR CH 1/16W 47K	1	
R1254	ERJ2GEJ473	M.RESISTOR CH 1/16W 47K	1	
R1255	ERJ2GEJ473	M.RESISTOR CH 1/16W 47K	1	
R1256	ERJ2GEJ473	M.RESISTOR CH 1/16W 47K	1	
R1301	ERJ2GEJ203	M.RESISTOR CH 1/16W 20K	1	
R1302	ERJ2GEJ222	M.RESISTOR CH 1/16W 2.2K	1	
R1303	ERJ2GEJ473	M.RESISTOR CH 1/16W 47K	1	
R1304	ERJ2GEJ102	M.RESISTOR CH 1/16W 1K	1	
R1305	ERJ2GEJ272	M.RESISTOR CH 1/16W 2.7K	1	
R1306	ERJ2GEJ153	M.RESISTOR CH 1/16W 15K	1	
R1307	ERJ2RHD272	M.RESISTOR CH 1/16W 2.7K	1	
R1308	ERJ2RHD471	M.RESISTOR CH 1/16W 470	1	
R1309	ERJ2RHD752	M.RESISTOR CH 1/16W 7.5K	1	
R1311	ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	1	
R1354	ERJ2GEJ272	M.RESISTOR CH 1/16W 2.7K	1	
R1355	ERJ2GEJ332	M.RESISTOR CH 1/16W 3.3K	1	
R1356	ERJ2RHD272	M.RESISTOR CH 1/16W 2.7K	1	
R1357	ERJ2RHD221	M.RESISTOR CH 1/16W 220	1	
R1358	ERJ2RHD203	M.RESISTOR CH 1/16W 20K	1	

Ref. No.	Part No.	Part Name& Description	Pcs	Remarks
T1051	VTP0524	TRANSFORMER	1	
■	VEK9045	MIC U.		
C491	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C492	ECUX0J474KBV	C.CAPACITOR CH 6.3V 0.47U	1	
C4801	ECUX1H153KBV	C.CAPACITOR CH 50V 0.015U	1	
C4802	ECUX1C473KBV	C.CAPACITOR CH 16V 0.047U	1	
C4803	ECUX1C333KBV	C.CAPACITOR CH 16V 0.033U	1	
C4804	ECUX1H471JCV	C.CAPACITOR CH 50V 470P	1	
C4805	ECUX1A154KBV	C.CAPACITOR CH 10V 0.15U	1	
C4806	ECUX1H153KBV	C.CAPACITOR CH 50V 0.015U	1	
C4807	ECUX1C473KBV	C.CAPACITOR CH 16V 0.047U	1	
C4808	ECUX1H471JCV	C.CAPACITOR CH 50V 470P	1	
C4809	ECUX1A154KBV	C.CAPACITOR CH 10V 0.15U	1	
C4810	ECUX1C333KBV	C.CAPACITOR CH 16V 0.033U	1	
C4811	ECUX1H682KBV	C.CAPACITOR CH 50V 6800P	1	
C4812	ECST0JY106Z	T.CAPACITOR CH 6.3V 10U	1	
C4813	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C4814	ECUX1H682KBV	C.CAPACITOR CH 50V 6800P	1	
C4815	ECST0JY106Z	T.CAPACITOR CH 6.3V 10U	1	
C4816	ECUX1H682KBV	C.CAPACITOR CH 50V 6800P	1	
C4817	VCEV0JHY470R	E.CAPACITOR CH 6.3V 47U	1	
C4818	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C4819	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C4820	ECYX1H821JCV	C.CAPACITOR CH 50V 820P	1	
C4821	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C4823	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C4901	ECUX1H222KBV	C.CAPACITOR CH 50V 2200P	1	
C4902	ECUX1H222KBV	C.CAPACITOR CH 50V 2200P	1	
C4903	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C4905	VCEV0JHY470R	E.CAPACITOR CH 6.3V 47U	1	
C4906	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C4908	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C4910	VCEV0JHY470R	E.CAPACITOR CH 6.3V 47U	1	
C4911	VCEV0JHY470R	E.CAPACITOR CH 6.3V 47U	1	
C4912	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C4914	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C4915	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C4916	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C4917	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C4950	ECUX1H472KBV	C.CAPACITOR CH 50V 4700P	1	
C4951	ECUX1H472KBV	C.CAPACITOR CH 50V 4700P	1	
C4952	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C6401	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C6402	ECST0JY106Z	T.CAPACITOR CH 6.3V 10U	1	
D491	MA132WA	DIODE	1	
D6801	CL170UR-CD	CHIP LED	1	
D6802	PH310	DIODE	1	
D6803	SLR738AV50AC	LED	1	

D6000	GLR7000AV30AC	LED	1	

Ref. No.	Part No.	Part Name& Description	Pcs	Remarks
D6804	SLR738AV50AC	LED	1	
FP4903	VJS3498A026	CONNECTOR (FEMALE) 26P	1	
IC4801	NJM2112V	IC	1	
IC4802	NJM2172V	IC	1	
IR6401	PNA4611M05VT	IR RECEIVER	1	
JK2501	VJJ0580	JACK	1	
JK4501	VJJ0567	EDIT-E JACK (5P)	1	
JK4502	VJJ0695	S JACK	1	
JK4503	VJJ0666	DV JACK	1	
JK4901	VJJ0414	MIC JACK	1	
JK4902	VJJ0668	AV JACK (4P)	1	
LB2501	VLQ0584	COIL	1	
LB2502	VLQ0584	COIL	1	
LB4901	VLQ0584	COIL	1	
LB4902	VLQ0584	COIL	1	
LB4903	VLQ0584	COIL	1	
LB4904	VLQ0584	COIL	1	
LB4905	VLQ0584	COIL	1	
LB4906	VLQ0584	COIL	1	
LB4907	VLQ0585	COIL	1	
Q491	2SD1030	TRANSISTOR	1	
Q492	2SD2216	TRANSISTOR	1	
Q4805	2SD2216	TRANSISTOR	1	
Q4810	2SD2216	TRANSISTOR	1	
Q4811	2SD2216	TRANSISTOR	1	
Q4901	2SD2216	TRANSISTOR	1	
Q4902	2SB1218A	TRANSISTOR	1	
Q4903	2SD2216	TRANSISTOR	1	
Q4904	2SB1218A	TRANSISTOR	1	
Q4905	2SD2216	TRANSISTOR	1	
Q4906	2SD2216	TRANSISTOR	1	
Q4907	2SD2216	TRANSISTOR	1	
QR4903	UN9212	TRANSISTOR-RESISTOR	1	
QR4904	UN9212	TRANSISTOR-RESISTOR	1	
R491	ERJ3GEYJ225	M.RESISTOR CH 1/16W 2.2K	1	
R492	ERJ3GEYJ334	M.RESISTOR CH 1/16W 330K	1	
R493	ERJ3GEYG822	M.RESISTOR CH 1/16W 8.2K	1	
R494	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R495	ERJ3GEYJ106	M.RESISTOR CH 1/16W 10M	1	
R2501	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R4802	ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R4803	ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R4805	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R4806	ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R4807	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R4808	ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	

Ref. No.	Part No.	Part Name& Description	Pcs	Remarks
R4809	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R4810	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R4811	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R4812	ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R4813	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R4814	ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R4815	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R4816	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R4817	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R4818	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R4820	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R4821	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R4822	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R4823	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R4824	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R4825	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R4826	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R4833	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R4834	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R4860	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R4861	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R4863	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R4864	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R4901	ERJ3GEYG682	M.RESISTOR CH 1/16W 6.8K	1	
R4903	ERJ3GEYG682	M.RESISTOR CH 1/16W 6.8K	1	
R4904	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R4905	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R4906	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4907	ERJ6GEYJ154	M.RESISTOR CH 1/10W 150K	1	
R4908	ERJ6GEYJ563	M.RESISTOR CH 1/10W 56K	1	
R4909	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R4910	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R4911	ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	1	
R4912	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R4913	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4914	ERJ6GEYJ154	M.RESISTOR CH 1/10W 150K	1	
R4915	ERJ6GEYJ563	M.RESISTOR CH 1/10W 56K	1	
R4916	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R4917	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R4918	ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	1	
R4919	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R4920	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R4921	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R4923	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R4924	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R4925	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R4926	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R4927	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R4928	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R4929	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R4930	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R4999	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R6402	ERJ6GEYJ470	M.RESISTOR CH 1/10W 47	1	
R6803	ERJ6GEYJ181	M.RESISTOR CH 1/10W 180	1	

Ref. No.	Part No.	Part Name& Description	Pcs	Remarks
S6801	VSS0539	EJECT SWITCH	1	
VZ4901	VRT0158	TRANSIENT/SURGE ABSORBER	1	
		MISCELLANEOUS		
	VEK9046	ECM UNIT	1	
	VGQ5762	IR HOLDER	1	
	VSC5065	MIC SHIELD PLATE	1	
■	VEP26239A	MONITOR C.B.A.		(RTL)
C901	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	1	
C903	ECST0JY106Z	T.CAPACITOR CH 6.3V 10U	1	
C904	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	1	
C907	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	1	
C908	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	1	
C909	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	1	
C910	ECST0JY106Z	T.CAPACITOR CH 6.3V 10U	1	
C914	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	1	
C915	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C916	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C917	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C918	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C919	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C920	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C921	ECST1AY106Z	T.CAPACITOR CH 10V 10U	1	
C922	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C923	ECUM1C106VBP	C.CAPACITOR CH 16V 10U	1	
C924	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	1	
C926	ECST0JY106Z	T.CAPACITOR CH 6.3V 10U	1	
C927	ECUX0J105KBV	C.CAPACITOR CH 50V 1U	1	
C929	ECUX1E152KBQ	C.CAPACITOR CH 25V 1500P	1	
C930	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	1	
C931	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C932	ECUM1A225KBM	C.CAPACITOR CH 10V 2.2U	1	
C934	ECUM1C105KBP	C.CAPACITOR CH 16V 1U	1	
C935	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C936	ECUX1A105VBV	C.CAPACITOR CH 10V 1U	1	
C937	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	1	
C938	ECUX1H101JCQ	C.CAPACITOR CH 50V 100P	1	
C939	ECUX1H331GCV	C.CAPACITOR CH 50V 330P	1	
C940	ECUX1H560JCQ	C.CAPACITOR CH 50V 56P	1	
C941	ECUX1H100CCQ	C.CAPACITOR CH 50V 10P	1	
C942	ECUM1C474KBN	C.CAPACITOR CH 16V 0.47U	1	
C943	ECUX1A224KBV	C.CAPACITOR CH 10V 0.22U	1	
C944	ECUX1A224KBV	C.CAPACITOR CH 10V 0.22U	1	
C945	ECUX1E332KBQ	C.CAPACITOR CH 25V 3300P	1	
C946	ECUM1C106VBP	C.CAPACITOR CH 16V 10U	1	
C947	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C948	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C949	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	1	

[illegible]	[illegible]	[illegible]	[illegible]	

Ref. No.	Part No.	Part Name& Description	Pcs	Remarks
C950	ECUM1C105KBP	C.CAPACITOR CH 16V 1U	1	
C952	ECUX0J105KBV	C.CAPACITOR CH 50V 1U	1	
C953	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	1	
D901	RB520S30	DIODE	1	
D902	RB520S30	DIODE	1	
D903	MA6S121	DIODE	1	
D904	MA159A	DIODE	1	
D905	MA6S121	DIODE	1	
FP901	VJS3319B024	CONNECTOR (FEMALE) 24P	1	
FP903	VJS3971B017	CONNECTOR (FEMALE) 17P	1	
FP904	VJS3971B021	CONNECTOR (FEMALE) 21P	1	
FP905	VJS3931B006	CONNECTOR (FEMALE) 6P	1	
IC901	AN2547FHQ	IC	1	
IC902	NJM3414AV	IC	1	
IC908	SN74LV04APW	IC	1	
LB901	VLQ0584	COIL	1	
LB902	VLQ0584	COIL	1	
LB903	VLQ0584	COIL	1	
LB904	VLQ0584	COIL	1	
LB905	VLQ0584	COIL	1	
Q901	2SD2216	TRANSISTOR	1	
Q902	2SK2159	TRANSISTOR	1	
QR901	UN9210	TRANSISTOR-RESISTOR	1	
QR902	UN9111	TRANSISTOR-RESISTOR	1	
QR903	UN9214J	TRANSISTOR-RESISTOR	1	
QR904	UN9210	TRANSISTOR-RESISTOR	1	
R901	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R903	ERJ2GEJ153	M.RESISTOR CH 1/16W 15K	1	
R904	ERJ2GEJ103	M.RESISTOR CH 1/16W 10K	1	
R905	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R906	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R908	ERJ2GEJ101	M.RESISTOR CH 1/16W 100	1	
R909	ERJ2GEJ101	M.RESISTOR CH 1/16W 100	1	
R910	ERJ2GEJ101	M.RESISTOR CH 1/16W 100	1	
R912	ERJ2GEJ564	M.RESISTOR CH 1/16W 560K	1	
R913	ERJ2GEJ333	M.RESISTOR CH 1/16W 33K	1	
R914	ERJ2GEJ104	M.RESISTOR CH 1/16W 100K	1	
R915	ERJ3RBD333	M.RESISTOR CH 1/16W 33K	1	
R916	ERJ2GEJ105	M.RESISTOR CH 1/16W 1M	1	
R917	ERJ2GEJ123	M.RESISTOR CH 1/16W 12K	1	
R918	ERJ2GEJ272	M.RESISTOR CH 1/16W 2.7K	1	
R919	ERJ2GEJ103	M.RESISTOR CH 1/16W 10K	1	
R920	ERJ3GEYJ100	M.RESISTOR CH 1/16W 10	1	
R921	ERJ2GEJ153	M.RESISTOR CH 1/16W 15K	1	
R922	ERJ2GEJ333	M.RESISTOR CH 1/16W 33K	1	
R923	ERJ2GEJ333	M.RESISTOR CH 1/16W 33K	1	
R924	ERJ2GEJ223	M.RESISTOR CH 1/16W 22K	1	

Ref. No.	Part No.	Part Name& Description	Pcs	Remarks
R925	ERJ2GEJ153	M.RESISTOR CH 1/16W 15K	1	
R926	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R927	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R928	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R929	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	1	
R930	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R931	ERJ2GEJ473	M.RESISTOR CH 1/16W 47K	1	
R932	ERJ2RHD683	M.RESISTOR CH 1/16W 68K	1	
R933	ERJ2RHD104	M.RESISTOR CH 1/16W 100K	1	
R934	ERJ2GEJ103	M.RESISTOR CH 1/16W 10K	1	
R936	ERJ2GEJ473	M.RESISTOR CH 1/16W 47K	1	
R937	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R938	ERJ2GEJ103	M.RESISTOR CH 1/16W 10K	1	
R939	ERJ2GEJ103	M.RESISTOR CH 1/16W 10K	1	
R940	ERJ2GEJ102	M.RESISTOR CH 1/16W 1K	1	
R941	ERJ2GEJ102	M.RESISTOR CH 1/16W 1K	1	
R942	ERJ2GEJ102	M.RESISTOR CH 1/16W 1K	1	
R943	ERJ2GEJ101	M.RESISTOR CH 1/16W 100	1	
R945	ERJ2GEJ102	M.RESISTOR CH 1/16W 1K	1	
R946	ERJ2GEJ102	M.RESISTOR CH 1/16W 1K	1	
R947	ERJ2GE0R00	M.RESISTOR CH 1/16W 0	1	
R948	ERJ2GEJ101	M.RESISTOR CH 1/16W 100	1	
R949	ERJ2GEJ101	M.RESISTOR CH 1/16W 100	1	
R950	ERJ2GEJ101	M.RESISTOR CH 1/16W 100	1	
R951	ERJ2GEJ560	M.RESISTOR CH 1/16W 56	1	
R952	ERJ2GEJ472	M.RESISTOR CH 1/16W 4.7K	1	
R953	ERJ3GEYJ823	M.RESISTOR CH 1/16W 82K	1	
R954	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R955	ERJ2GEJ101	M.RESISTOR CH 1/16W 100	1	
R956	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R957	ERJ3RBD101	M.RESISTOR CH 1/16W 100	1	
R958	ERJ2GEJ153	M.RESISTOR CH 1/16W 15K	1	
R962	ERJ2GEJ561	M.RESISTOR CH 1/16W 560	1	
R963	ERJ2GEJ104	M.RESISTOR CH 1/16W 100K	1	
R964	ERJ2GEJ333	M.RESISTOR CH 1/16W 33K	1	
R965	ERJ2GEJ563	M.RESISTOR CH 1/16W 56K	1	
R966	ERJ2GEJ152	M.RESISTOR CH 1/16W 1.5K	1	
R967	ERJ2GEJ104	M.RESISTOR CH 1/16W 100K	1	
R968	ERJ2GEJ333	M.RESISTOR CH 1/16W 33K	1	
R969	ERJ2GEJ333	M.RESISTOR CH 1/16W 33K	1	
R970	ERJ2GEJ562	M.RESISTOR CH 1/16W 5.6K	1	
R971	ERJ3GEYJ335	M.RESISTOR CH 1/16W 3.3M	1	
R972	ERJ2GEJ224	M.RESISTOR CH 1/16W 220K	1	
R973	ERJ8GEYJ335	M.RESISTOR CH 1/8W 3.3M	1	
R974	ERJ8GEYJ335	M.RESISTOR CH 1/8W 3.3M	1	
R975	ERJ2GEJ223	M.RESISTOR CH 1/16W 22K	1	
R976	ERJ3RBD681	M.RESISTOR CH 1/16W 680	1	
R977	ERJ3RED180	M.RESISTOR CH 1/16W 18	1	
R978	ERJ6GEYJ335	M.RESISTOR CH 1/10W 3.3M	1	
R979	ERJ3GEYJ224	M.RESISTOR CH 1/16W 220K	1	
T901	G5DYZ0000007	TRANSFORMER	1	
T902	EFTU21R203	TRANSFORMER	1	

Ref. No.	Part No.	Part Name& Description	Pcs	Remarks
		MISCELLANEOUS		
	VGQ5748	LCD SHIELD SHEET	1	
■	VEP28276A	E.V.F.(A) C.B.A.		(RTL)
C801	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	1	
C802	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	1	
C803	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	1	
C804	ECST0JY106Z	T.CAPACITOR CH 6.3V 10U	1	
C805	ECUX0J105KBV	C.CAPACITOR CH 50V 1U	1	
C806	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	1	
C807	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	1	
C808	ECUX1A334KBV	C.CAPACITOR CH 10V 0.33U	1	
C811	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	1	
C812	ECST0JY106Z	T.CAPACITOR CH 6.3V 10U	1	
C813	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	1	
C817	ECUM1C105KBP	C.CAPACITOR CH 16V 1U	1	
C818	ECUX0J474KBV	C.CAPACITOR CH 6.3V 0.47U	1	
C819	ECUX0J474KBV	C.CAPACITOR CH 6.3V 0.47U	1	
C820	ECUX0J474KBV	C.CAPACITOR CH 6.3V 0.47U	1	
C821	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	1	
C822	ECUX1E471KBQ	C.CAPACITOR CH 25V 470P	1	
C823	ECUX1E471KBQ	C.CAPACITOR CH 25V 470P	1	
C824	ECUX1E471KBQ	C.CAPACITOR CH 25V 470P	1	
C825	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	1	
C826	ECUX0J105KBV	C.CAPACITOR CH 50V 1U	1	
C828	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	1	
C829	ECST0JY335Z	T.CAPACITOR CH 6.3V 3.3U	1	
C830	ECUX1C682KBQ	C.CAPACITOR CH 16V 6800P	1	
C831	ECUX1E102KBQ	C.CAPACITOR CH 25V 1000P	1	
C833	ECUX1H180JCQ	C.CAPACITOR CH 50V 18P	1	
C834	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	1	
D801	MA338	DIODE	1	
D802	MA2S728	DIODE	1	
D803	MA2S728	DIODE	1	
FP802	VJS4306B027	CONNECTOR (FEMALE) 27P	1	
FP803	VJS4340B022	CONNECTOR (FEMALE) 22P	1	
IC801	LV4135W	IC	1	
IC802	TC7SET08FU	IC	1	
L804	VLQ0807K100	COIL 10UH	1	
L805	VLQ0426J100	COIL 10UH	1	
R801	ERJ2GEJ102	M.RESISTOR CH 1/16W 1K	1	
R802	ERJ2GEJ122	M.RESISTOR CH 1/16W 1.2K	1	
R803	ERJ2GEJ102	M.RESISTOR CH 1/16W 1K	1	
R804	ERJ2GE0R00	M.RESISTOR CH 1/16W 0	1	
R805	ERJ2GE0R00	M.RESISTOR CH 1/16W 0	1	
R806	ERJ2GEJ102	M.RESISTOR CH 1/16W 1K	1	

R606	ERJ2GEJ102	M.RESISTOR CHP 1/10W 1K	1	

Ref. No.	Part No.	Part Name& Description	Pcs	Remarks
R808	ERJ2GE0R00	M.RESISTOR CH 1/16W 0	1	
R809	ERJ2GE0R00	M.RESISTOR CH 1/16W 0	1	
R810	ERJ2GE0R00	M.RESISTOR CH 1/16W 0	1	
R811	ERJ2GEJ102	M.RESISTOR CH 1/16W 1K	1	
R812	ERJ2GEJ103	M.RESISTOR CH 1/16W 10K	1	
R813	ERJ2GEJ103	M.RESISTOR CH 1/16W 10K	1	
R814	ERJ2GEJ102	M.RESISTOR CH 1/16W 1K	1	
R815	ERJ2GEJ103	M.RESISTOR CH 1/16W 10K	1	
R816	ERJ2GE0R00	M.RESISTOR CH 1/16W 0	1	
R817	ERJ2GEJ333	M.RESISTOR CH 1/16W 33K	1	
R818	ERJ2GEJ103	M.RESISTOR CH 1/16W 10K	1	
R819	ERJ2GEJ104	M.RESISTOR CH 1/16W 100K	1	
R820	ERJ2GEJ394	M.RESISTOR CH 1/16W 390K	1	
R824	ERJ2GE0R00	M.RESISTOR CH 1/16W 0	1	
R825	ERJ2GE0R00	M.RESISTOR CH 1/16W 0	1	
R826	ERJ2GEJ102	M.RESISTOR CH 1/16W 1K	1	
R827	ERJ2RHD183	M.RESISTOR CH 1/16W 18K	1	
R828	ERJ2GEJ102	M.RESISTOR CH 1/16W 1K	1	
R829	ERJ2RHD123	M.RESISTOR CH 1/16W 12K	1	
R830	ERJ2RHD392	M.RESISTOR CH 1/16W 3.9K	1	
R831	ERJ2GEJ101	M.RESISTOR CH 1/16W 100	1	
R832	ERJ2GEJ101	M.RESISTOR CH 1/16W 100	1	
R833	ERJ2GEJ101	M.RESISTOR CH 1/16W 100	1	
R834	ERJ2GEJ103	M.RESISTOR CH 1/16W 10K	1	
R835	ERJ2GEJ153	M.RESISTOR CH 1/16W 15K	1	
R836	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R837	ERJ2GEJ103	M.RESISTOR CH 1/16W 10K	1	
R838	ERJ2GEJ101	M.RESISTOR CH 1/16W 100	1	
R839	ERJ2GEJ101	M.RESISTOR CH 1/16W 100	1	
R840	ERJ2GEJ101	M.RESISTOR CH 1/16W 100	1	
R841	ERJ2GEJ101	M.RESISTOR CH 1/16W 100	1	
R842	ERJ6GEYJ4R7	M.RESISTOR CH 1/10W 4.7	1	
R843	ERJ2GE0R00	M.RESISTOR CH 1/16W 0	1	
R844	ERJ2GEJ102	M.RESISTOR CH 1/16W 1K	1	
R845	ERJ2RHD393	M.RESISTOR CH 1/16W 39K	1	
R846	ERJ2RHD333	M.RESISTOR CH 1/16W 93K	1	
R881	ERJ2GEJ473	M.RESISTOR CH 1/16W 47K	1	
		MISCELLANEOUS		
	VWJ1401	FLAT CARD CABLE	1	
■	VEP28277A	E.V.F.(B) C.B.A.		(RTL)
BL820	VLL0218	BACK LIGHT	1	
C881	ECUM1C106VBP	C.CAPACITOR CH 16V 10U	1	
L806	VLQ0779K100	COIL 10UH	1	
Q881	2SK2055	TRANSISTOR	1	
T881	ETJ11K91AM	TRANSFORMER	1	

Ref. No.	Part No.	Part Name& Description	Pcs	Remarks
		MISCELLANEOUS		
	VJB28242	INTERCONNECTION	1	
■	VEP22301A	CCD FLEX. CARD C.B.A.		(RTL)
C292	ECST1VX225Z	T.CAPACITOR CH 35V 2.2U	1	
C295	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C296	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
D291	MA143	DIODE	1	
PS291	VJS3500C014	CONNECTOR (FEMALE) 14P	1	
Q291	2SC3930	CHIP TRANSISTOR	1	
R292	ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
		MISCELLANEOUS		
	VJB22301	FLEX. CARD	1	
■	VEK9040	LENS FLEX. CARD C.B.A.		(RTL)
		MISCELLANEOUS		
	HT-120B	HALL SENSOR	1	
	VJB20823	FLEX. CARD	1	
	VSP1083	DETECTION SWITCH	1	
■	VEP06D81A	HALL SENSOR FLEX. CARD		(RTL)
IC991	DN8797MSC	IC	1	
IC992	DN8797MSC	IC	1	
■	VEP06D73A	CASSETTE DET. FLEX. CARD		(RTL)
S6301	VSP0584	SWITCH	1	
S6302	VSP0584	SWITCH	1	

REAR CASE UNIT

- CAM LED
- VTR LED

MODE SELECT

POWER ON

FP6301

1	POWER SW
2	———
3	D GND
4	S/S
5	SCAN2
6	SCAN1
7	DEW
8	PHOTO SHOT
9	CAM LED
10	———
11	CAM VTR
12	VTR LED
13	D GND
14	ZOOM AD
15	V REF Ⓗ

VTR MAIN C.B.A.

E.V.F.(A)C.B.A.

FP802

MON E FRP	1
NOREG GND	2
NOREG GND	3
NOREG GND	4
MON E B OUT	5
MON E G OUT	6
MON E R OUT	7
E BL 6V	8
EVF S CLK	9
EVF SD	10
EVF CS	11
EVF 12V	12
MON E PLL	13
EVF 3V	14
EVF 5V	15
E CHR B	16
E CHR G	17
E CHR R	18
GND	19
GND	20
EVF B	21
EVF G	22
EVG R	23
E PLL	24
CLAMP	25
EVF VD	26
EVF HD	27

FP803

H VDD	1
CK H1	2
CK H2	3
STH	4
X STH	5
CSH	6
PCG	7
X PCG	8
VSS	9
G	10
R	11
B	12
PCD	13
X ENB	14
ENB	15
CSV	16
X STV	17
STV	18
V VDD	19
CK V2	20
CK V1	21
COM	22

E.V.F.(B)C.B.A.

EVF LCD PANEL

CASSETE DOWN FLEX. CARD C.B.A.

FP6303

1	C DOWN
2	GND
3	GND
4	GND
5	———
6	EJECT

FP801

1	MON E FRP
2	NOREG GND
3	NOREG GND
4	MON E B OUT
5	MON E G OUT
6	MON E R OUT
7	E BL 6V
8	EVF SCLK
9	EVF SD
10	EVF CS
11	EVF 12V
12	MON E PLL
13	EVF 3V
14	EVF 5V
15	E CHR B
16	E CHR G
17	E CHR R
18	GND
19	GND
20	EVF B
21	EVF G
22	EVG R
23	E PLL
24	CLAMP
25	EVF VD
26	EVF HD

FP601

D GND	1
D GND	2
D GND	3
MON M V COM	4
MON M FRP	5
MON M B OUT	6
MON M G OUT	7
MON M R OUT	8
CHR BLK1	9
CHR B	10
CHR G	11
CHR R	12
M VD	13
M HD	14
M B	15
M G	16
M R	17
BL BRIGHT Ⓗ	18
LCD CS	19
LCD SD	20
MON SCK	21

PS1001

SP OUT1	1	80	SP OUT2
SP OUT1	2	79	SP OUT2
SPK 3V	3	78	S 5V
SPK 3V	4	77	CAM 12V
CAM -6.5V	5	76	DAC 3V
DIF 3V	6	75	V OUT 3V
DIF 3V	7	74	A 3V(2)
———	8	73	A 3V(2)
———	9	72	REG 3.1V
LI BATT(+)	10	71	REG 3.1V
DC IN SW	11	70	SW NOREG
CCD ON Ⓗ	12	69	P ON Ⓛ
LCD BL CONT	13	68	LCD ON Ⓗ
V REF	14	67	INN BATT Ⓗ
PROTECT	15	66	D GND
A GND	16	65	D GND
A GND	17	64	D GND
A GND	18	63	D GND
A GND	19	62	D GND
A GND	20	61	D GND
A GND	21	60	D GND
A GND	22	59	D GND
A GND	23	58	D GND
A GND	24	57	D GND
REG D2V	25	56	REG A5V
REG D2V	26	55	REG A5V
REG D3V	27	54	REG A5V
REG D3V	28	53	LCD 5V
LCD 3V	29	52	LCD 15V
EVF 3V	30	51	———
MEMORY 3V	31	50	TRI WAVE
NOREG GND	32	49	NOREG GND
NOREG GND	33	48	NOREG GND
NOREG GND	34	47	NOREG GND
NOREG	35	46	NOREG
NOREG	36	45	NOREG
LCD OPEN	37	44	LCD RVS
CYL VM	38	43	CAP VM
CYL VM	39	42	CAP VM
CYL SW	40	41	CAP SW

MONITOR C.B.A.

FP904

1	LCD SCK
2	LCD SCK
3	LCD SD
4	MON CS
5	BL BRIGHT Ⓗ
6	M R
7	M G
8	M B
9	M HD
10	M VD
11	CHR R
12	CHR G
13	CHR B
14	CHR BLK1
15	MON M R OUT
16	MON M G OUT
17	MON M B OUT
18	MON M FRP
19	MON M V COM
20	D GND
21	D GND

FP905

RVS Ⓛ	1
RVS GND	2
RVS VCC	3
OPEN Ⓗ	4
OPEN GND	5
OPEN VCC	6

HALL SENSOR FLEX. CARD C.B.A.

FP901

ST H1	1
OE H	2
Q2 H	3
CLK1	4
CLK2	5
CLK3	6
GND	7
VIDEO B	8
VIDEO G	9
VIDEO R	10
VB	11
RL	12
ST H2	13
VEE	14
V COM	15
VG H	16
VDD	17
ST V2	18
OE V	19
CP V	20
UD	21
ST V1	22
VSS	23
VG OFF	24

MONITOR LCD PANEL

FP903

M 5V	1
M 5V	2
M 12V	3
M -15V	4
M BL 5V	5
D GND	6
D GND	7
D GND	8
M 3V	9
M 3V	10
HALL VCC	11
LCD RVS	12
LCD OPEN	13
NOREG	14
NOREG	15
NOREG GND	16
NOREG GND	17

POWER C.B.A.

PP1001

SP OUT1	1	80	SP OUT2
SP OUT1	2	79	SP OUT2
SPK 3V	3	78	S 5V
SPK 3V	4	77	CAM 12V
CAM -6.5V	5	76	DAC 3V
DIF 3V	6	75	V OUT 3V
DIF 3V	7	74	A 3V(2)
———	8	73	A 3V(2)
———	9	72	REG 3.1V
LI BATT(+)	10	71	REG 3.1V
DC IN SW	11	70	SW NOREG
CCD ON Ⓗ	12	69	P ON Ⓛ
LCD BL CONT	13	68	LCD ON Ⓗ
V REF	14	67	INN BATT Ⓗ
PROTECT	15	66	D GND
A GND	16	65	D GND
A GND	17	64	D GND
A GND	18	63	D GND
A GND	19	62	D GND
A GND	20	61	D GND
A GND	21	60	D GND
A GND	22	59	D GND
A GND	23	58	D GND
A GND	24	57	D GND
REG D2V	25	56	REG A5V
REG D2V	26	55	REG A5V
REG D3V	27	54	REG A5V
REG D3V	28	53	LCD 5V
LCD 3V	29	52	LCD 15V
EVF 3V	30	51	———
MEMORY 3V	31	50	TRI WAVE
NOREG GND	32	49	NOREG GND
NOREG GND	33	48	NOREG GND
NOREG GND	34	47	NOREG GND
NOREG	35	46	NOREG
NOREG	36	45	NOREG
LCD OPEN	37	44	LCD RVS
CYL VM	38	43	CAP VM
CYL VM	39	42	CAP VM
CYL SW	40	41	CAP SW

FP602

NOREG GND	1
NOREG GND	2
NOREG	3
NOREG	4
LCD OPEN	5
LCD RVS	6
HALL VCC	7
M 3V	8
M 3V	9
D GND	10
D GND	11
D GND	12
M BL 5V	13
M -15V	14
M 12V	15
M 5V	16

SPEAKER UNIT

P4201

SP OUT1	1
SP OUT2	2

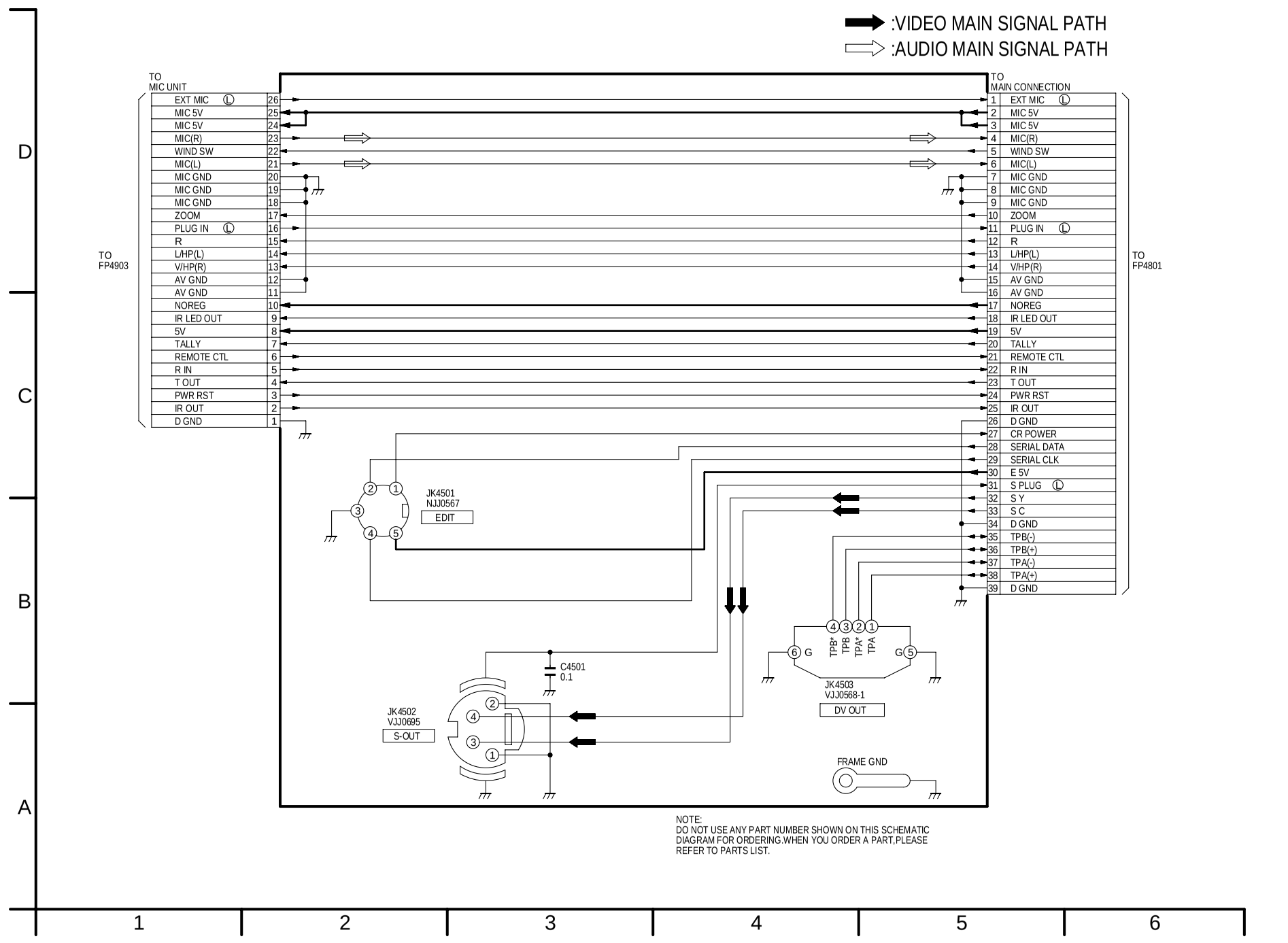
FP1001

LI BATT(+)	1
LI BATT(+)	2
———	3
GND	4
GND	5
GND	6
GND	7
GND	8
———	9
DC IN SW	10
DC IN SW	11
———	12
+B	13
+B	14
+B	15
+B	16
+B	17
———	18
D	19
D	20

BATTERY CATCHER UNIT

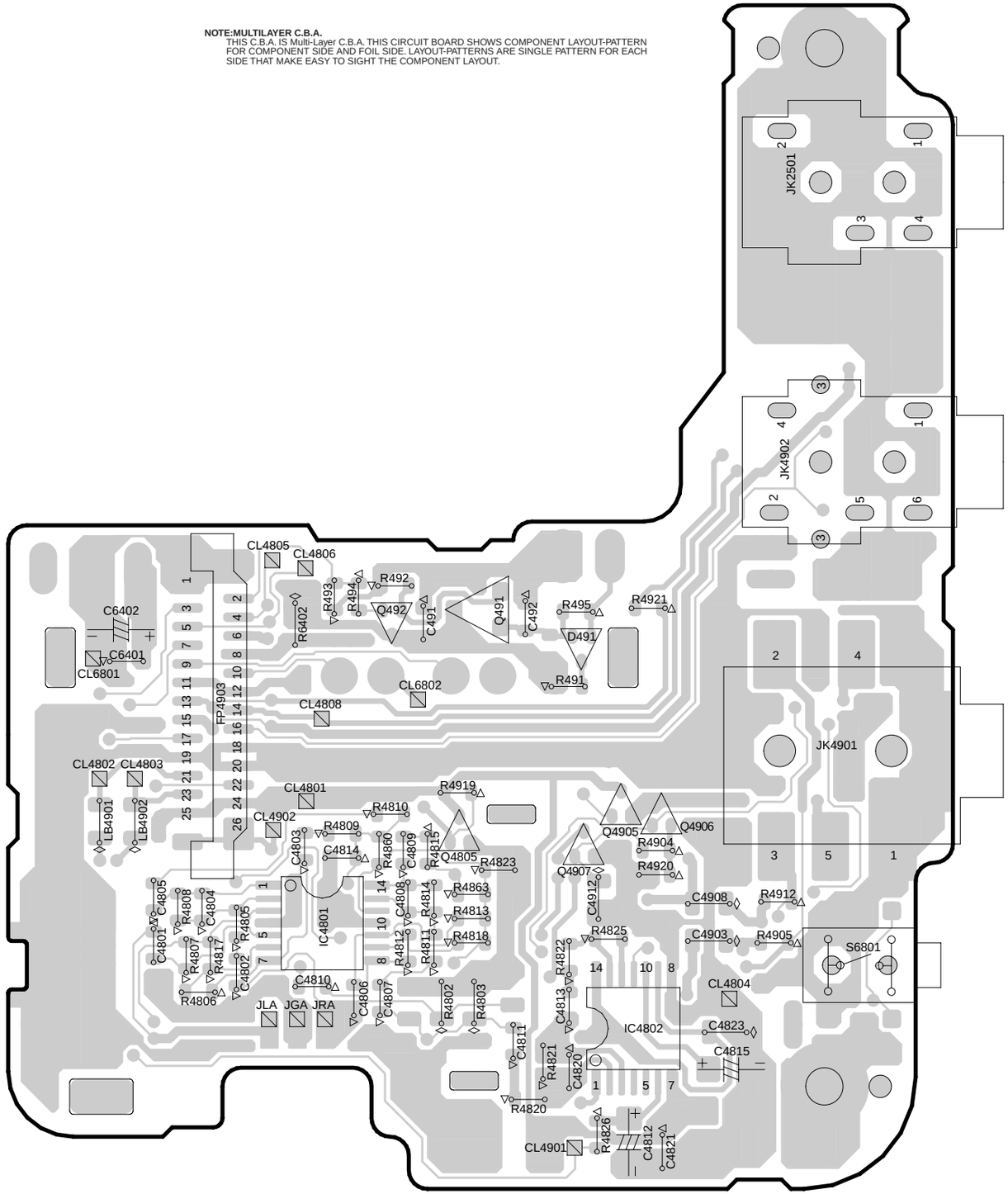
Ⓐ Ⓑ Ⓒ

12 13 14 15 16 17 18 19 20 21 22

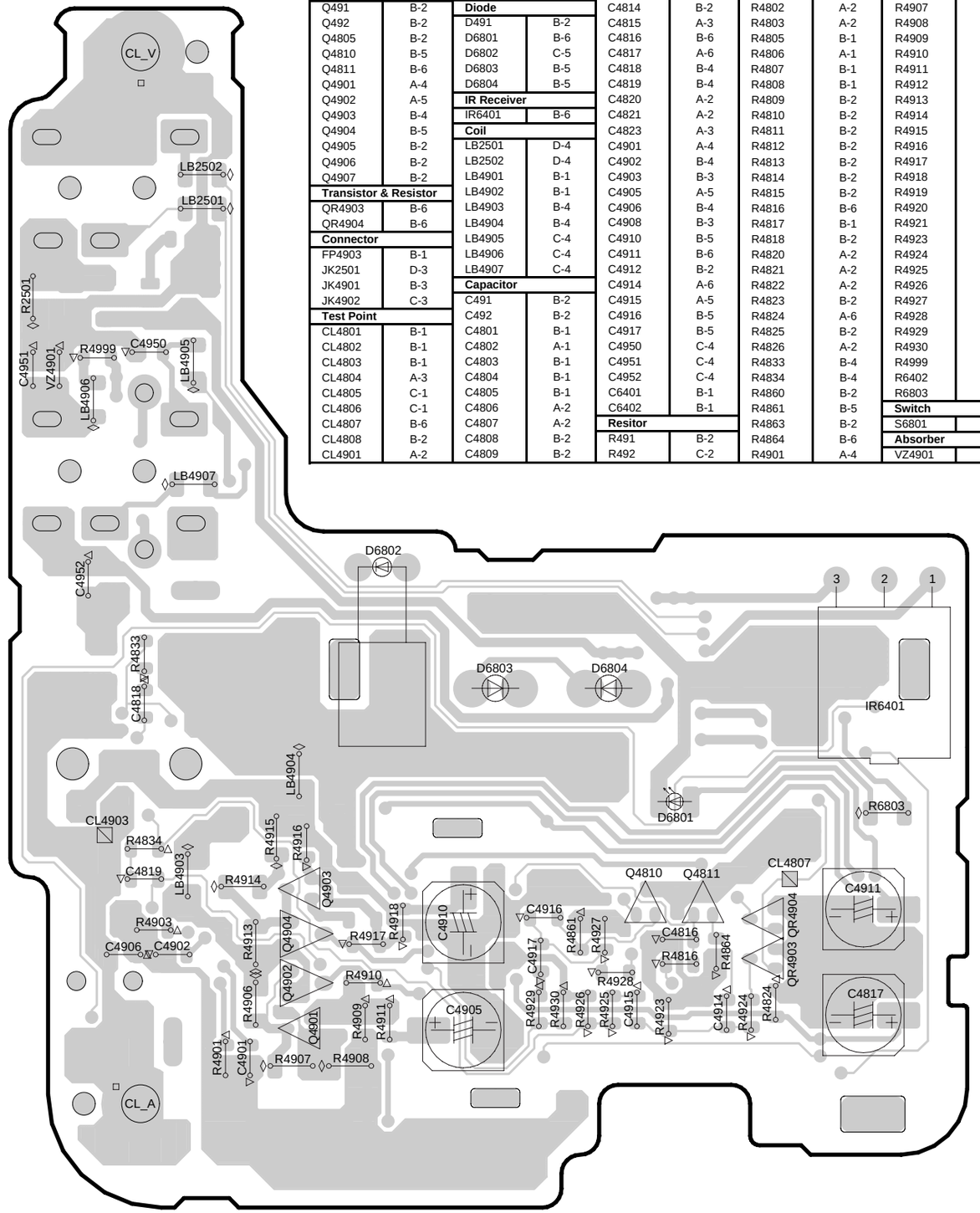

:VIDEO MAIN SIGNAL PATH
:AUDIO MAIN SIGNAL PATH
TO MIC UNIT
TO FP4903
EXT MIC (L) 26
MIC 5V 25
MIC 5V 24
MIC(R) 23
WIND SW 22
MIC(L) 21
MIC GND 20
MIC GND 19
MIC GND 18
ZOOM 17
PLUG IN (L) 16
R 15
L/HP(L) 14
V/HP(R) 13
AV GND 12
AV GND 11
NOREG 10
IR LED OUT 9
5V 8
TALLY 7
REMOTE CTL 6
R IN 5
T OUT 4
PWR RST 3
IR OUT 2
D GND 1
TO MAIN CONNECTION
TO FP4801
1 EXT MIC (L)
2 MIC 5V
3 MIC 5V
4 MIC(R)
5 WIND SW
6 MIC(L)
7 MIC GND
8 MIC GND
9 MIC GND
10 ZOOM
11 PLUG IN (L)
12 R
13 L/HP(L)
14 V/HP(R)
15 AV GND
16 AV GND
17 NOREG
18 IR LED OUT
19 5V
20 TALLY
21 REMOTE CTL
22 R IN
23 T OUT
24 PWR RST
25 IR OUT
26 D GND
27 CR POWER
28 SERIAL DATA
29 SERIAL CLK
30 E 5V
31 S PLUG (L)
32 S Y
33 S C
34 D GND
35 TPB(-)
36 TPB(+)
37 TPA(-)
38 TPA(+)
39 D GND
JK4501
NJJ0567
EDIT
C4501
0.1
JK4502
VJJ0695
S-OUT
JK4503
VJJ0568-1
DV OUT
TPB*
TPB
TPA*
TPA
G
FRAME GND
NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

MIC UNIT : VEK9045

NOTE:MULTILAYER C.B.A.
THIS C.B.A. IS Multi-Layer C.B.A. THIS CIRCUIT BOARD SHOWS COMPONENT LAYOUT-PATTERN FOR COMPONENT SIDE AND FOIL SIDE. LAYOUT-PATTERNS ARE SINGLE PATTERN FOR EACH SIDE THAT MAKE EASY TO SIGHT THE COMPONENT LAYOUT.



(COMPONENT SIDE)



(FOIL SIDE)

Mic Unit

Integrated Circuit	
IC4801	B-2
IC4802	A-2
Transistor	
Q491	B-2
Q492	B-2
Q4805	B-2
Q4810	B-5
Q4811	B-6
Q4901	A-4
Q4902	A-5
Q4903	B-4
Q4904	B-5
Q4905	B-2
Q4906	B-2
Q4907	B-2
Transistor & Resistor	
QR4903	B-6
QR4904	B-6
Connector	
FP4903	B-1
JK2501	D-3
JK4901	B-3
JK4902	C-3
Test Point	
CL4801	B-1
CL4802	B-1
CL4803	B-1
CL4804	A-3
CL4805	C-1
CL4806	C-1
CL4807	B-6
CL4808	B-2
CL4901	A-2
CL4902	B-1
CL4903	B-4
CL6801	B-1
CL6802	B-2
Diode	
D491	B-2
D6801	B-6
D6802	C-5
D6803	B-5
D6804	B-5
IR Receiver	
IR6401	B-6
Coil	
LB2501	D-4
LB2502	D-4
LB4901	B-1
LB4902	B-1
LB4903	B-4
LB4904	B-4
LB4905	C-4
LB4906	C-4
LB4907	C-4
Capacitor	
C491	B-2
C492	B-2
C4801	B-1
C4802	A-1
C4803	B-1
C4804	B-1
C4805	B-1
C4806	A-2
C4807	A-2
C4808	B-2
C4809	B-2
C4810	A-1
C4811	A-2
C4812	A-2
C4813	A-2
C4814	B-2
C4815	A-3
C4816	B-6
C4817	A-6
C4818	B-4
C4819	B-4
C4820	A-2
C4821	A-2
C4823	A-3
C4901	A-4
C4902	B-4
C4903	B-4
C4904	B-4
C4905	C-4
C4906	C-4
C4907	C-4
C4908	B-3
C4910	B-5
C4911	B-6
C4912	B-2
C4914	A-6
C4915	A-5
C4916	B-5
C4917	B-5
C4950	C-4
C4951	C-4
C4952	C-4
C6401	B-1
C6402	B-1
Resitor	
R491	B-2
R492	C-2
R493	C-2
R494	C-2
R495	B-2
R2501	C-4
R4802	A-2
R4803	A-2
R4804	A-2
R4805	B-1
R4806	A-1
R4807	B-1
R4808	B-1
R4809	B-2
R4810	B-2
R4811	B-2
R4812	B-2
R4813	B-2
R4814	B-6
R4815	B-1
R4816	B-2
R4817	B-6
R4818	B-2
R4820	B-2
R4821	A-2
R4822	A-2
R4823	A-2
R4824	A-4
R4825	B-2
R4826	B-5
R4833	B-2
R4834	B-4
R4860	B-2
R4861	B-5
R4863	B-2
R4864	B-6
R4901	A-4
R4903	B-4
R4904	B-2
R4905	B-3
R4906	B-2
R4907	B-2
R4908	B-2
R4909	B-2
R4910	B-2
R4911	B-2
R4912	B-5
R4913	B-5
R4914	B-5
R4915	B-5
R4916	B-5
R4917	B-2
R4918	B-2
R4919	B-2
R4920	B-2
R4921	B-2
R4923	A-6
R4924	A-6
R4925	A-5
R4926	A-5
R4927	B-5
R4928	B-5
R4929	A-5
R4930	A-5
R4999	C-4
R6402	B-1
R6803	B-6
Switch	
S6801	A-3
Absorber	
VZ4901	C-4

:AUDIO MAIN SIGNAL PATH

ECM
ECM(R)
ECM(L)
JRA
JLA
JGA

IC4801
NJM2112V

IC4802
NJM2172V
(EVR)

Q4810
2SD2216J
(AMP)

Q4811
2SD2216J
(AMP)

Q4805
2SD2216J
(SWITCHING MIC 5V)

Q4905
2SD2216J
(SWITCHING MIC 5V)

QR4904
UN9212J
(WIND SW)

QR4903
UN9212J
(WIND SW)

Q4904
2SB1218A
(AMP)

Q4903
2SD2216J
(AMP)

Q4902
2SB1218A
(AMP)

Q4901
2SD2216J
(AMP)

Q4906
2SD2216J
(AMP)

Q4907
2SD2216J
(INV.)

Q491
2SD1030
(AMP)

Q492
2SD2216J
(AMP)

JK2501
VJJ0580-1
DIGITAL STILL OUT

JK4902
VJJ0668
AV OUT

JK4901
VJJ0414
MIC IN

IR6401
PNA4611M05VT
REMOTE CONTROL RECIEVER

D6803
SLR738AV50AC
IR LED

D6804
SLR738AV50AC
IR LED

D6802
PH310-1
IR LED

D6801
CL170UR-CD-T
TALLY LED

D491
MA132WA

S6801
VSS0539
RESET

TO JACK FP4903

26	EXT MIC (L)
25	MIC 5V
24	MIC 5V
23	MIC(R)
22	WIND SW
21	MIC(L)
20	MIC GND
19	MIC GND
18	MIC GND
17	ZOOM
16	PLUG IN (L)
15	R
14	L/HP(L)
13	V/HP(R)
12	AV GND
11	AV GND
10	NOREG
9	IR LED OUT
8	5V
7	TALLY
6	REMOTE CTL
5	R IN
4	D OUT
3	PWR RST
2	IR OUT
1	D GND

NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NOTE:
THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS REC MODE.

Monitor C.B.A.

Integrated Circuit	
IC901	B-3
IC902	D-2
IC908	B-1

Transistor	
Q901	D-2
Q902	C-1

Transistor & Resistor	
QR901	B-1
QR902	C-3
QR903	A-2
QR904	A-2

Connector	
FP901	C-3
FP903	B-2
FP904	C-2
FP905	D-2

Test Point	
CL901	C-3
CL902	C-3
CL903	D-3
CL906	C-3
CL919	C-1
CL920	B-1
CL921	A-2
CL922	B-1
CL923	A-1
CL924	A-2
TL901	A-1
TL902	D-3
TL903	D-1

Diode	
D901	B-2
D902	B-2
D903	A-1
D904	C-1
D905	B-2

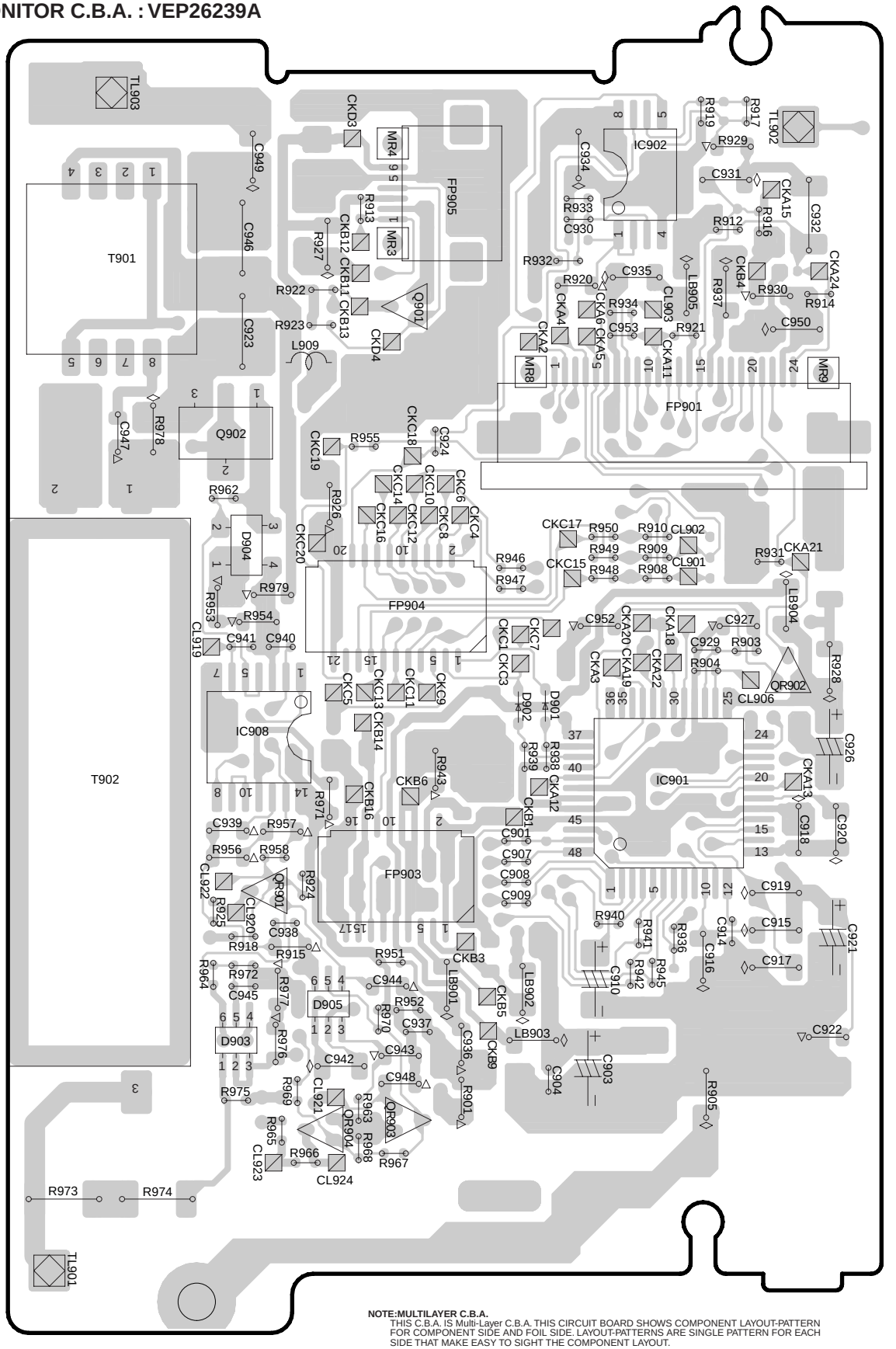
Coil	
L909	C-2
LB901	B-2
LB902	B-2
LB903	A-2
LB904	C-3
LB905	D-3

Transformer	
T901	D-1
T902	B-1

Capacitor	
C901	B-2
C903	A-2
C904	A-2
C907	B-2
C908	B-2
C909	B-2
C910	B-2
C914	B-3
C915	B-3
C916	B-3
C917	B-3
C918	B-3
C919	B-3
C920	B-3
C921	B-3
C922	B-3
C923	C-1
C924	C-2
C926	B-3
C927	C-3
C929	C-3
C930	D-2
C931	D-3
C932	D-3
C934	D-2
C935	D-2
C936	A-2
C937	B-2
C938	B-1
C939	B-1
C940	C-1
C941	C-1
C942	A-2
C943	A-2
C944	B-2
C945	B-1
C946	D-1
C947	C-1
C948	A-2
C949	D-1
C950	D-3
C952	C-2
C953	C-2

Resitor	
R901	A-2
R903	C-3
R904	C-3
R905	A-3
R908	C-3
R909	C-3
R910	C-3
R912	D-3
R913	D-2
R914	D-3
R915	B-1
R916	D-3
R917	D-3
R918	B-1
R919	D-3
R920	D-2
R921	C-3
R922	D-2
R923	D-2
R924	B-2
R925	B-1
R926	C-2
R927	D-2
R928	C-3
R929	D-3
R930	D-3
R931	C-3
R932	D-2
R933	D-2
R934	D-2
R936	B-3
R937	D-3
R938	B-2
R939	B-2
R940	B-2
R941	B-2
R942	B-2
R943	B-2
R945	B-3
R946	C-2
R947	C-2
R948	C-2
R949	C-2
R950	C-2
R951	B-2
R952	B-2
R953	C-1
R954	C-1
R955	C-2
R956	B-1
R957	B-1
R958	B-1
R962	C-1
R963	A-2
R964	B-1
R965	A-1
R966	A-2
R967	A-2
R968	A-2
R969	A-2
R970	B-2
R971	B-2
R972	B-1
R973	A-1
R974	A-1
R975	A-1
R976	A-1
R977	B-1
R978	C-1
R979	C-1

MONITOR C.B.A. : VEP26239A



NOTE:MULTILAYER C.B.A.
THIS C.B.A. IS Multi-Layer C.B.A. THIS CIRCUIT BOARD SHOWS COMPONENT LAYOUT-PATTERN FOR COMPONENT SIDE AND FOIL SIDE. LAYOUT-PATTERNS ARE SINGLE PATTERN FOR EACH SIDE THAT MAKE EASY TO SIGHT THE COMPONENT LAYOUT.

:VIDEO MAIN SIGNAL PATH

TO POWER FP903

FP602-16	M 5V	1
FP602-16	M 5V	2
FP602-15	M 12V	3
FP602-14	M -15V	4
FP602-13	M BL 5V	5
FP602-12	D GND	6
FP602-11	D GND	7
FP602-10	D GND	8
FP602-9	M 3V	9
FP602-8	M 3V	10
FP602-7	HALL VCC	11
FP602-6	LCD RVS	12
FP602-5	LCD OPEN	13
FP602-4	NOREG	14
FP602-3	NOREG	15
FP602-2	NOREG GND	16
FP602-1	NOREG GND	17

LB904 VLQ0584-T, C926 6V10, LB902 VLQ0584-T, LB901 VLQ0584-T, C936 1, R951 56, C937 0.1, R952 4700, C934 ECUV1C105KBN, LB903 VLQ0584-T, R927 0, R906 0

TO MAIN CONNECTION FP904

FP601-21	LCD SCK	1
FP601-21	LCD SCK	2
FP601-20	LCD SD	3
FP601-19	LCD CS	4
FP601-18	BL BRIGHT	5
FP601-17	M R	6
FP601-16	M G	7
FP601-15	M B	8
FP601-14	M HD	9
FP601-13	M VD	10
FP601-12	CHR R	11
FP601-11	CHR G	12
FP601-10	CHR B	13
FP601-9	CHR BLK1	14
FP601-8	MON M R OUT	15
FP601-7	MON M G OUT	16
FP601-6	MON M B OUT	17
FP601-5	MON M FRP	18
FP601-4	MON M V COM	19
FP601-3,2,1	D GND	20
FP601-3,2,1	D GND	21

C909 0.1, C907 0.1, C908 0.1, R940 1K, R941 1K, R942 1K, R945 1K, R948 100, R949 100, R950 100, C924 0.1, R955 100, R926 0

TO FRAME GND

HALL SENSOR FLEX.CARD (VEP06D81A)

IC992 DN8797MSC (FACTING FORWARD/NORMAL)

FP905

RVS (L)		1
RVS GND		2
RVS VCC		3
OPEN (H)		4
OPEN GND		5
OPEN VCC		6

IC991 DN8797MSC (OPEN/CLOSE)

R901 0, R922 33K, R913 33K, R923 33K, Q901 2SD2216J (INV.)

QR902 UN9111J (AMP)

IC901 AN2547FHQ (LCD DRIVE)

TEST3, TEST2, OEH, QH, OEV, CPV, STV2, STV1, VSS, PH DET, VCO, VCC3, LOAD, SCLK, SDATA, UD, RL, LCDEN, VDD, VCC1, GND1, VSYNC, CSYNC, Y/G, B-Y/B, R-Y/R, VREF, OSDR, OSDG, OSDB, YS, COMDC, VCOM, B DC DET, BOUT, CPH1, CPH2, CPH3, OEH, STH1, STH2, VCC2, GND2, ROUT, R DC DET, GOUT, G DC DET

C927 1, C952 1, C929 1500P, R903 15K, R904 10K, R938 10K, R939 10K, D901 RB520S30, D902 RB520S30, R947 0, C904 0.1, C903 6V10, C901 0.1, R940 1K, C910 6V10, R936 47K, C916 1, C914 0.1, C921 10V10, C922 0.01, C919 1, C917 1, C920 1, C918 1, C915 1, R920 10, R937 0

TO MONITOR LCD PANEL FP901

1	ST H1	B1
2	OE H	B2
3	Q2 H	B3
4	CLK1	B4
5	CLK2	B5
6	CLK3	B6
7	GND	
8	VIDEO B	
9	VIDEO G	
10	VIDEO R	
11	VB	B7
12	RL	B8
13	ST H2	
14	VEE	
15	V COM	
16	VG H	
17	VDD	
18	ST V2	B9
19	OE V	B10
20	CP V	B11
21	UD	B12
22	ST V1	B13
23	VSS	
24	VG OFF	

CL901, CL902, CL903, R910 100, R909 100, R908 100, LB905 VLQ0584-T, R928 0, R912 560K, R921 15K, C935 1, R934 10K, C953 0.01, R931 47K

IC902 NJM3414VTE1

R969 33K, R968 33K, R932 68K, C931 1, C932 2.2, R929 22, R917 12K, VCC, GND, C950 ECUV1C105KBN, C946 10, C923 10, R933 100K, C930 0.01, R919 10K, R916 1M, R914 100, R930 100

Q902 2SK2159 OR 2SK3065 (BACK LIGHT CONTROL)

T901 G5DYZ0000007, T902 EFTU21R203, R978 3.3M, C947 0.1, R973 3.3M, R974 3.3M, TL901, TL902, TL903, TO BACK LIGHT UNIT

CL921, D903 MA6S121, R976 680, R977 18, R975 22K, C948 0.1, C945 3300P, R972 220K, R964 33K, C949 0.1

IC908 SN74LV04APW (BACK LIGHT CONTROL)

C939 330P, C938 100P, R915 33K, R971 3.3M, VCC, GND, C940 56P, R954 0, R953 82K, C941 10P, CL919, R979 220K, R956 10K, R925 15K, CL920, QR901 UN9210J (BACK LIGHT CONTROL), R957 100, R958 15K, CL922, R924 22K, R918 2700, D904 MA159A, R962 560, R970 5600, QR903 UN9214J (BACK LIGHT CONTROL), QR904 UN9210J (INV.), R967 100K, C944 0.22, C943 0.22, R963 100K, CL924, CL923, R966 1500, R965 56K, D905 MA6S121, C942 0.47

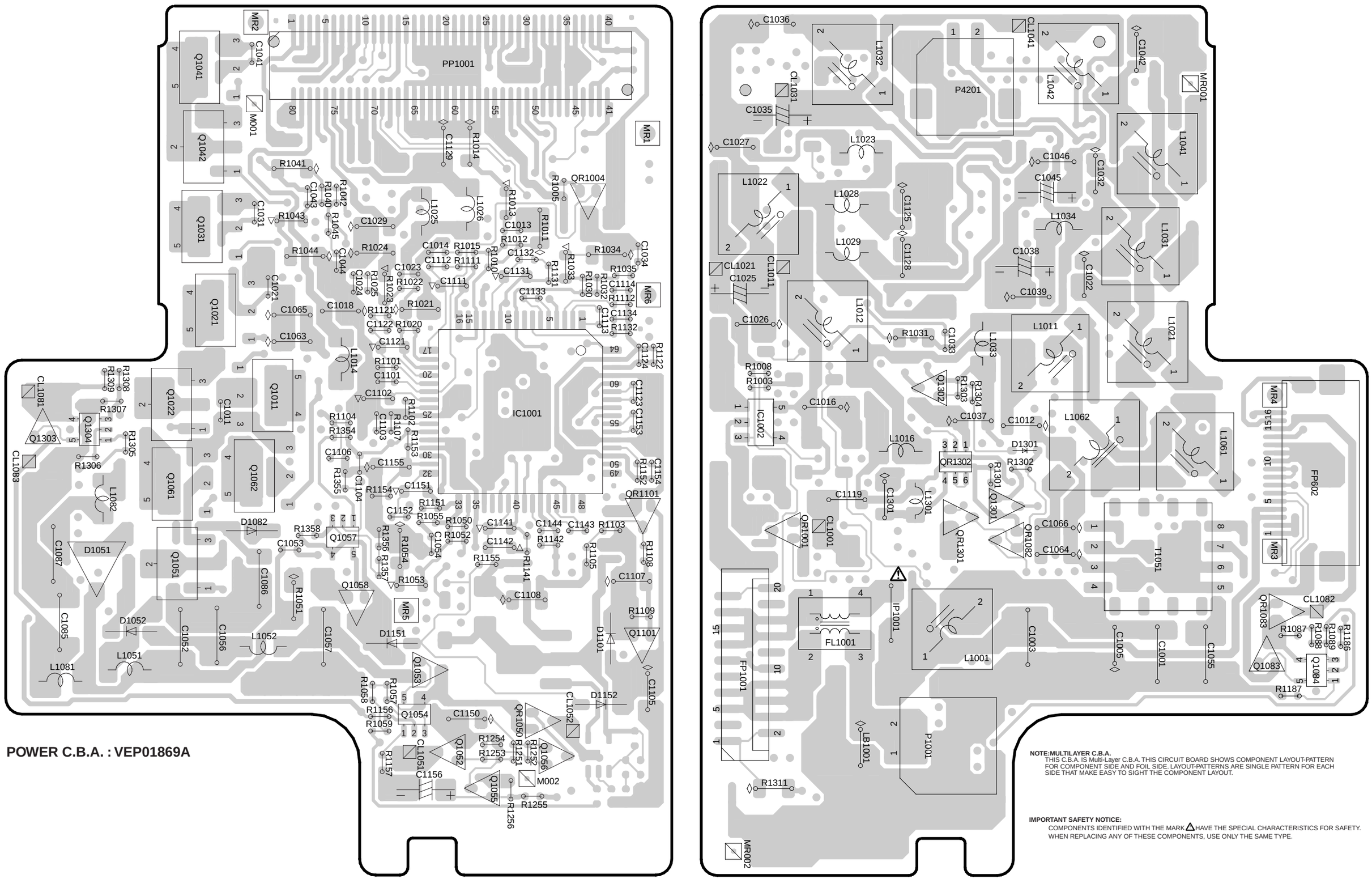
NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NOTE:
THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.(MONITOR: OPEN)

CAMERA LENS UNIT
FOCUS M.
ZOOM M.
IRIS
CCD C.B.A.
CCD
MIC UNIT
RS232C
VIDEO AUDIO OUT
MIC
EX MIC
OP AMP
SPEAKER
CAMERA
CDS/AGC/AD
CG
OSC
DSP
EEP ROM
VIDEO 1
VIDEO OUT SP AMP
VIDEO 2
AUDIO I/F
HEAD/REC AMP
H/R AMP
HEAD
VIDEO 3
PB Y/C
CAM Y/C
LCD RGB
VIOLA
LUPIN
GIPSY
PRE AMP
VCO
DIGITAL-I/F
PINE
FRONT JACK
DV TERMINAL
S-VIDEO OUT
EDIT 5PIN
LENS DRIVE
AF/ZOOM DRIVE
IRIS DRIVE
CONTROL
EVR DAC
EEP ROM
CONTROL uCON
DRIVE
CYL/CAP/LOADING DRIVE
CYL MOTOR
CAP MOTOR
LOADING MOTOR
COMP
COMP
TIMER
POWER CONTROL uCON
CHARAGEN
MONITOR C.B.A.
MONITOR CONTROLLER
MONITOR LCD PANEL
EVF C.B.A.
EVF CONTROLLER
EVF LCD PANEL
POWER C.B.A.
POWER
VTR MAIN C.B.A.(MODULE)
E
D
C
B
A
1
2
3
4
5
6
7

Power C.B.A.

Integrated Circuit	
IC1001	C-3
IC1002	C-4
Transistor	
Q1011	C-2
Q1021	C-1
Q1022	C-1
Q1031	C-1
Q1041	D-1
Q1042	D-1
Q1051	B-1
Q1052	A-2
Q1053	B-2
Q1054	A-2
Q1055	A-3
Q1056	A-3
Q1057	B-2
Q1058	B-2
Q1061	B-1
Q1062	B-2
Q1083	B-6
Q1084	B-6
Q1101	B-3
Q1301	B-5
Q1302	C-5
Q1303	C-1
Q1304	C-1
Transistor & Resistor	
QR1001	B-4
QR1004	D-3
QR1050	A-3
QR1082	B-5
QR1083	B-6
QR1101	B-3
QR1301	B-5
QR1302	B-5
Connector	
FP602	B-6
FP1001	B-4
P1001	A-5
P4201	D-5
PP1001	D-2
Test Point	
CL1001	B-4
CL1011	C-4
CL1021	C-4
CL1031	D-4
CL1041	D-5
CL1051	A-2
CL1052	A-3
CL1081	C-1
CL1082	B-6
CL1083	B-1
Diode	
D1051	B-1
D1052	B-1
D1082	B-2
D1101	B-3
D1151	B-2
D1152	A-3
D1301	B-5
Filter	
FL1001	B-4
IC Protector	
IP1001	B-4
Coil	
L1001	B-5
L1011	C-5
L1012	C-4
L1014	C-2
L1016	B-4
L1021	C-5
L1022	C-4
L1023	D-4
L1025	D-2
L1026	D-3
L1028	D-4
L1029	C-4
L1031	C-5
L1032	D-4
L1033	C-5
L1034	C-5
L1041	D-5
L1042	D-5
L1051	B-1
L1052	B-2
L1061	B-6
L1062	B-5
L1081	A-1
L1082	B-1
L1301	B-4
LB1001	A-4
Transformer	
T1051	B-6
Capacitor	
C1001	B-5
C1003	B-5
C1005	B-5
C1011	C-2
C1012	C-5
C1013	C-3
C1014	C-2
C1016	C-4
C1018	C-2
C1021	C-2
C1022	C-5
C1023	C-2
C1024	C-2
C1025	C-4
C1026	C-4
C1027	D-4
C1029	C-2
C1031	C-2
C1032	D-5
C1033	C-5
C1034	C-3
C1035	D-4
C1036	D-4
C1037	C-5
C1038	C-5
C1039	C-5
C1041	D-2
C1042	D-5
C1043	D-2
C1044	C-2
C1045	D-5
C1046	D-5
C1052	B-1
C1053	B-2
C1054	B-2
C1055	B-6
C1056	B-1
C1057	B-2
C1063	C-2
C1064	B-5
C1065	C-2
C1066	B-5
C1085	B-1
C1086	B-2
C1087	B-1
C1101	C-2
C1102	C-2
C1103	C-2
C1104	B-2
C1105	A-3
C1106	B-2
C1107	B-3
C1108	B-3
C1111	C-3
C1112	C-2
C1113	C-3
C1114	C-3
C1119	B-4
C1121	C-2
C1122	C-2
C1123	C-3
C1124	C-3
C1125	C-4
C1128	C-4
C1129	D-2
C1131	C-3
C1132	C-3
C1133	C-3
C1134	C-3
C1141	B-3
C1142	B-3
C1143	B-3
C1144	B-3
C1150	A-3
C1151	B-2
C1152	B-2
C1153	C-3
C1154	B-3
C1155	B-2
C1156	A-2
C1301	B-4
Resitor	
R1003	C-4
R1005	D-3
R1008	C-4
R1010	C-3
R1011	C-3
R1012	C-3
R1013	D-3
R1014	D-3
R1015	C-3
R1020	C-2
R1021	C-2
R1022	C-2
R1023	C-2
R1024	C-2
R1025	C-2
R1030	C-3
R1031	C-4
R1032	C-3
R1033	C-3
R1034	C-3
R1035	C-3
R1040	D-2
R1041	D-2
R1042	D-2
R1043	C-2
R1044	C-2
R1045	C-2
R1050	B-3
R1051	B-2
R1052	B-3
R1053	B-2
R1054	B-2
R1055	B-2
R1057	A-2
R1058	A-2
R1059	A-2
R1087	B-6
R1088	B-6
R1089	B-6
R1101	C-2
R1102	C-2
R1103	B-3
R1104	C-2
R1105	B-3
R1107	C-2
R1108	B-3
R1109	B-3
R1111	C-3
R1112	C-3
R1121	C-2
R1122	C-3
R1131	C-3
R1132	C-3
R1141	B-3
R1142	B-3
R1151	B-2
R1152	B-3
R1153	C-2
R1154	B-2
R1155	B-3
R1156	A-2
R1157	A-2
R1186	B-6
R1187	A-6
R1251	A-3
R1252	A-3
R1253	A-3
R1254	A-3
R1255	A-3
R1256	A-3
R1301	B-5
R1302	B-5
R1303	C-5
R1304	C-5
R1305	B-1
R1306	B-1
R1307	C-1
R1308	C-1
R1309	C-1
R1311	A-4
R1354	C-2
R1355	B-2
R1356	B-2
R1357	B-2
R1358	B-2


PP1001
IC1001
P4201
P1001
FP1001
FP602
T1051
FL1001
L1001
IP1001
LB1001
MR001
MR1
MR2
MR3
MR4
MR5
MR6
MR002
M001
M002
QR1004
QR1001
QR1301
QR1302
QR1082
QR1083
Q1041
Q1042
Q1031
Q1021
Q1011
Q1022
Q1061
Q1062
Q1051
Q1057
Q1058
Q1053
Q1054
Q1052
Q1055
Q1056
Q1101
Q1302
Q1303
Q1304
Q1083
Q1084
IC1002
D1051
D1052
D1082
D1151
D1101
D1301
D1152
L1081
L1082
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L1014
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L1021
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L1033
L1016
L1062
L1061
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CL1083
CL1031
CL1021
CL1011
CL1001
CL1052
CL1051
CL1082
P1001
R1311
R1307
R1306
R1308
R1309
R1305
R1354
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R1358
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R1042
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R1044
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R1021
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R1008
R1003
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R1301
R1302
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C1146
C1147
C1148
C1149

TO
BATTERY CATCHER UNIT
FP1001

D	20	
D	19	
	18	
+B	17	
+B	16	
+B	15	
+B	14	
+B	13	
	12	
DC IN SW	11	
DC IN SW	10	
	9	
GND	8	
GND	7	
GND	6	
GND	5	
GND	4	
	3	
LI BATT(+)	2	
LI BATT(+)	1	

R1003 2.2M
R1311 330
FL1001 VLF1378
VP1001 VSF0233F31
L1001 4.7u
C1003 10
C1001 10
C1005 ECUV1A335KBN
CL1001
LB1001 VLP0332A420T

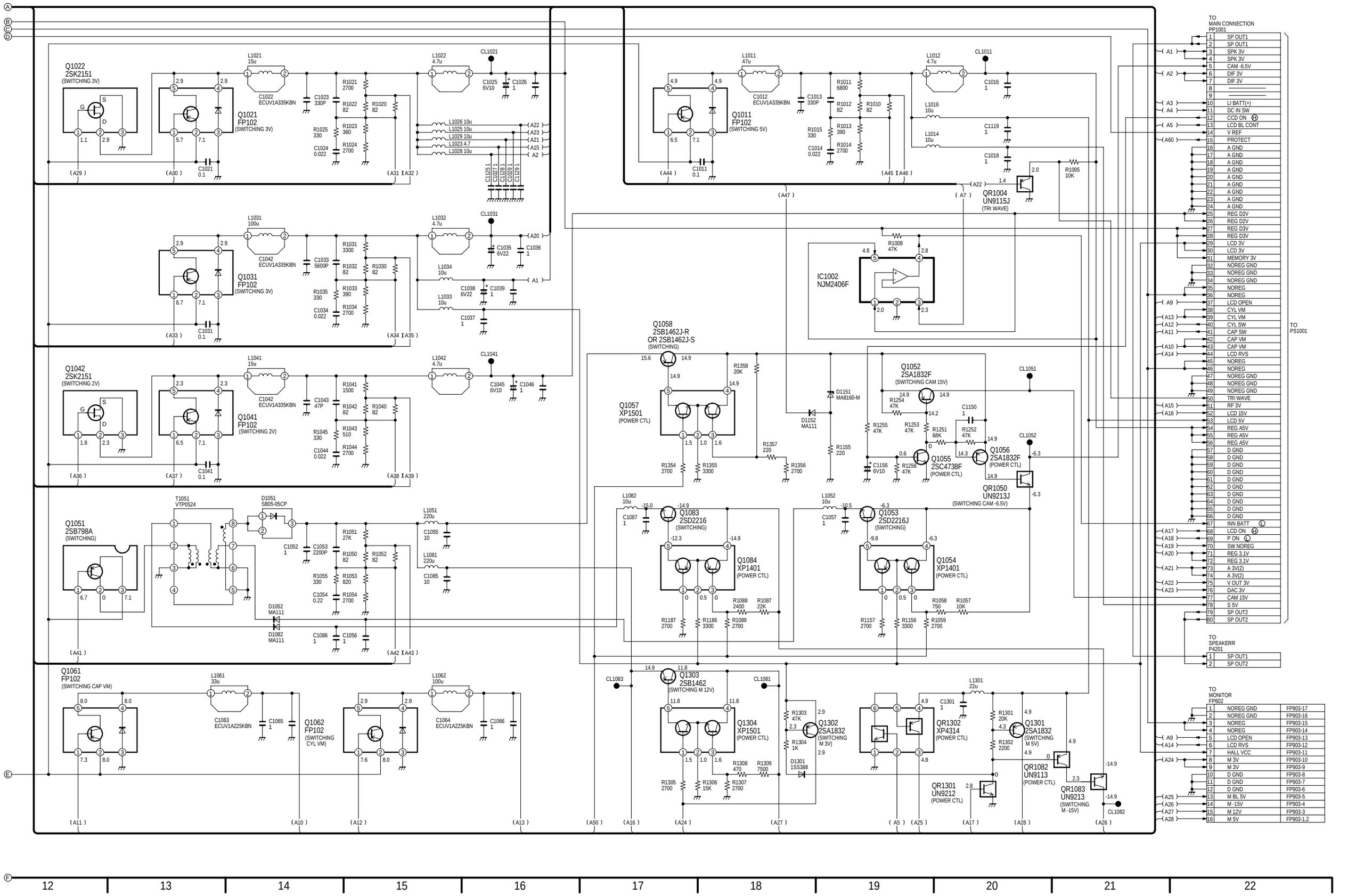
P1001

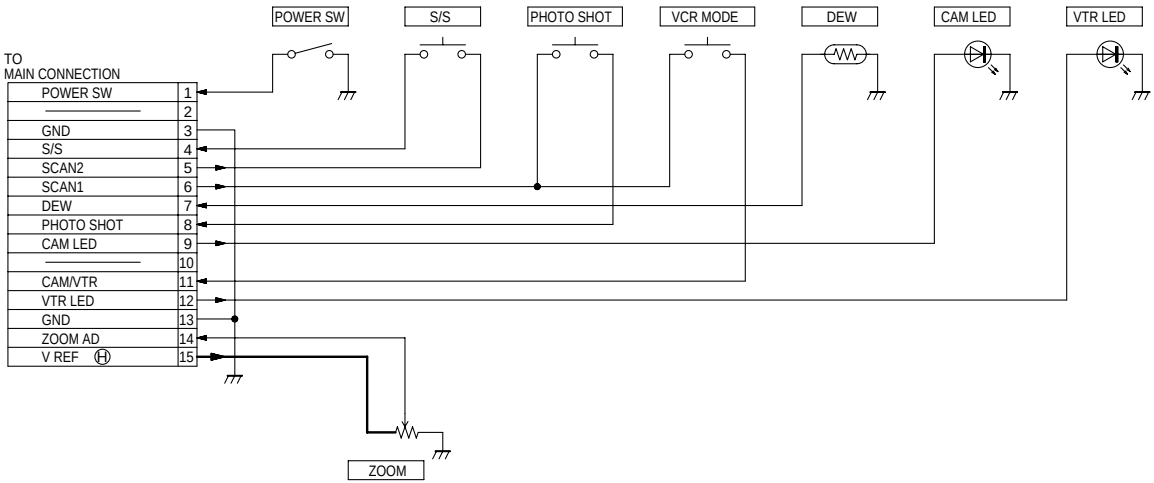
GND	1
GND	2

QR1001 UN9111J (SWITCHING NOREG)

IC1001 BA9734AKV (SWITCHING REGURATOR)

| | | |


Q1022
2SK2151
(SWITCHING 3V)
Q1021
FP102
(SWITCHING 3V)
L1021 15u
L1022 4.7u
CL1021
C1022 ECUV1A335KBN
C1025 6V10
C1026 1
C1023 330P
R1021 2700
R1022 82
R1020 82
R1025 330
R1023 360
C1024 0.022
R1024 2700
L1026 10u
L1025 10u
L1029 10u
L1023 4.7
L1028 10u
C1125 1
C1027 1
C1128 1
C1029 1
C1129 1
C1021 0.1
Q1011
FP102
(SWITCHING 5V)
L1011 47u
L1012 4.7u
CL1011
C1012 ECUV1A335KBN
C1013 330P
R1011 6800
R1012 82
R1010 82
R1015 330
R1013 390
C1014 0.022
R1014 2700
L1016 10u
L1014 10u
C1016 1
C1119 1
C1018 1
C1011 0.1
R1005 10K
QR1004
UN9115J
(TRI WAVE)
Q1031
FP102
(SWITCHING 3V)
L1031 100u
L1032 4.7u
CL1031
C1042 ECUV1A335KBN
C1033 5600P
R1031 3300
R1032 82
R1030 82
R1035 330
R1033 390
C1034 0.022
R1034 2700
L1034 10u
L1033 10u
C1035 6V22
C1036 1
C1038 6V22
C1039 1
C1037 1
C1031 0.1
IC1002
NJM2406F
R1008 47K
Q1042
2SK2151
(SWITCHING 2V)
Q1041
FP102
(SWITCHING 2V)
L1041 15u
L1042 4.7u
CL1041
C1042 ECUV1A335KBN
C1043 47P
R1041 1500
R1042 82
R1040 82
R1045 330
R1043 510
C1044 0.022
R1044 2700
C1045 6V10
C1046 1
C1041 0.1
Q1058
2SB1462J-R
OR 2SB1462J-S
(SWITCHING)
Q1057
XP1501
(POWER CTL)
R1358 20K
D1151 MA8160-M
D1152 MA111
R1357 220
R1155 220
R1354 2700
R1355 3300
R1356 2700
Q1052
2SA1832F
(SWITCHING CAM 15V)
CL1051
R1254 47K
C1150 1
R1255 47K
R1253 47K
R1251 68K
R1252 47K
Q1055
2SC4738F
(POWER CTL)
Q1056
2SA1832F
(POWER CTL)
CL1052
C1156 6V10
R1256 47K
QR1050
UN9213J
(SWITCHING CAM -6.5V)
Q1051
2SB798A
(SWITCHING)
T1051
VTP0524
D1051
SB05-05CP
L1051 220u
L1081 220u
C1055 10
C1085 10
C1052 1
C1053 2200P
R1051 27K
R1050 82
R1052 82
R1055 330
R1053 820
C1054 0.22
R1054 2700
D1052 MA111
D1082 MA111
C1086 1
C1056 1
L1082 10u
C1087 1
Q1083
2SD2216
(SWITCHING)
Q1084
XP1401
(POWER CTL)
R1088 2400
R1087 22K
R1187 2700
R1186 3300
R1089 2700
L1052 10u
C1057 1
Q1053
2SD2216J
(SWITCHING)
Q1054
XP1401
(POWER CTL)
R1058 750
R1057 10K
R1157 2700
R1156 3300
R1059 2700
Q1061
FP102
(SWITCHING CAP VM)
L1061 33u
C1063 ECUV1A225KBN
C1065 1
Q1062
FP102
(SWITCHING CYL VM)
L1062 100u
C1064 ECUV1A225KBN
C1066 1
CL1083
Q1303
2SB1462
(SWITCHING M 12V)
CL1081
Q1304
XP1501
(POWER CTL)
R1303 47K
Q1302
2SA1832
(SWITCHING M 3V)
R1304 1K
D1301 1SS388
R1308 470
R1309 7500
R1305 2700
R1306 15K
R1307 2700
L1301 22u
C1301 1
QR1302
XP4314
(POWER CTL)
R1301 20K
R1302 2200
Q1301
2SA1832
(SWITCHING M 5V)
QR1082
UN9113
(POWER CTL)
QR1301
UN9212
(POWER CTL)
QR1083
UN9213
(SWITCHING M -15V)
CL1082
TO MAIN CONNECTION PP1001
1 SP OUT1
2 SP OUT1
3 SPK 3V
4 SPK 3V
5 CAM -6.5V
6 DIF 3V
7 DIF 3V
10 LI BATT(+)
11 DC IN SW
12 CCD ON
13 LCD BL CONT
14 V REF
15 PROTECT
16 A GND
17 A GND
18 A GND
19 A GND
20 A GND
21 A GND
22 A GND
23 A GND
24 A GND
25 REG D2V
26 REG D2V
27 REG D3V
28 REG D3V
29 LCD 3V
30 LCD 3V
31 MEMORY 3V
32 NOREG GND
33 NOREG GND
34 NOREG GND
35 NOREG
36 NOREG
37 LCD OPEN
38 CYL VM
39 CYL VM
40 CYL SW
41 CAP SW
42 CAP VM
43 CAP VM
44 LCD RVS
45 NOREG
46 NOREG
47 NOREG GND
48 NOREG GND
49 NOREG GND
50 TRI WAVE
51 RF 3V
52 LCD 15V
53 LCD 5V
54 REG A5V
55 REG A5V
56 REG A5V
57 D GND
58 D GND
59 D GND
60 D GND
61 D GND
62 D GND
63 D GND
64 D GND
65 D GND
66 D GND
67 INN BATT
68 LCD ON
69 P ON
70 SW NOREG
71 REG 3.1V
72 REG 3.1V
73 A 3V(2)
74 A 3V(2)
75 V OUT 3V
76 DAC 3V
77 CAM 15V
78 S 5V
79 SP OUT2
80 SP OUT2
TO PS1001
TO SPEAKERR P4201
1 SP OUT1
2 SP OUT2
TO MONITOR FP602
1 NOREG GND FP903-17
2 NOREG GND FP903-16
3 NOREG FP903-15
4 NOREG FP903-14
5 LCD OPEN FP903-13
6 LCD RVS FP903-12
7 HALL VCC FP903-11
8 M 3V FP903-10
9 M 3V FP903-9
10 D GND FP903-8
11 D GND FP903-7
12 D GND FP903-6
13 M BL 5V FP903-5
14 M -15V FP903-4
15 M 12V FP903-3
16 M 5V FP903-1,2
A1 A2 A3 A4 A5 A60 A9 A13 A12 A11 A10 A14 A15 A16 A17 A18 A19 A20 A21 A22 A23 A24 A25 A26 A27 A28
A29 A30 A31 A32 A33 A34 A35 A36 A37 A38 A39 A41 A42 A43 A44 A45 A46 A47 A7 A50 A5
12 13 14 15 16 17 18 19 20 21 22

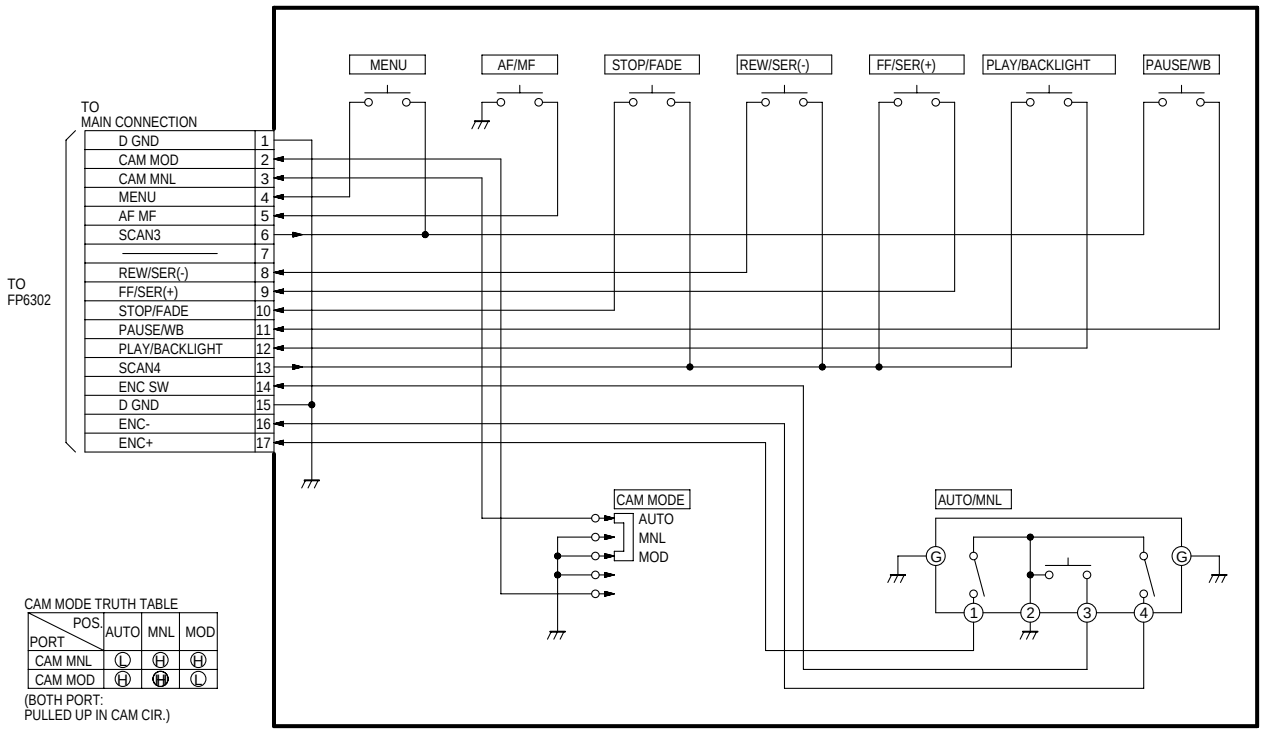

POWER SW
S/S
PHOTO SHOT
VCR MODE
DEW
CAM LED
VTR LED
TO
MAIN CONNECTION
POWER SW 1
2
GND 3
S/S 4
SCAN2 5
SCAN1 6
DEW 7
PHOTO SHOT 8
CAM LED 9
10
CAM/VTR 11
VTR LED 12
GND 13
ZOOM AD 14
V REF Ⓗ 15
ZOOM

C

B

A

1 2 3 4



CAM MODE TRUTH TABLE

PORT \ POS.	AUTO	MNL	MOD
CAM MNL	Ⓛ	Ⓗ	Ⓗ
CAM MOD	Ⓗ	Ⓗ	Ⓛ

(BOTH PORT:
PULLED UP IN CAM CIR.)

C B A

1 2 3 4

Check List for the Standard Accessories

AC Adaptor Set

..... **AC Adaptor**

..... **AC Mains Lead** (VJA0940)

..... **DC Input Lead** (VJA1088)

..... **Battery Pack** (VSB0418)

..... **AV Cable** (K2KC4CB00001)

..... **S-Video Cable** (VJA1120)

..... **Remote Controller**

NV-DS15 ..... VEQ2398
NV-DS150 ..... VEQ2405

..... **Button-Type Battery** (CR2025)

..... **Lens Cap and Lens Cap Cord** (VYF2700)

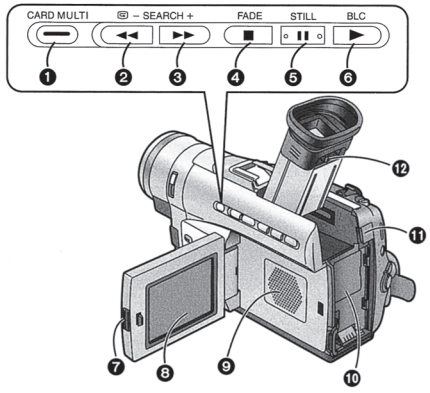
..... **Shoulder Strap** (VFC3299)

..... **Digital Video Head Cleaner** (VFK1451)

..... **MultiMediaCard** (VW-MMC8E) **(NV-DS25 only)**

Controls and Functions

For more details, see the pages indicated in brackets.



2 Rewind/Review Button [◀◀]
Recording Check Button [⟲]
Reverse Search Button [–SEARCH]

3 Fast Forward/Cue Button [▶▶]
Forward Search Button [SEARCH+]

4 Stop Button [■]
Fade Button [FADE]

5 Pause Button [❚❚]
Still Button [STILL]

6 Play Button [▶]
Backlight Button [BLC]

7 LCD Monitor Open Button [▲OPEN]

8 LCD Monitor

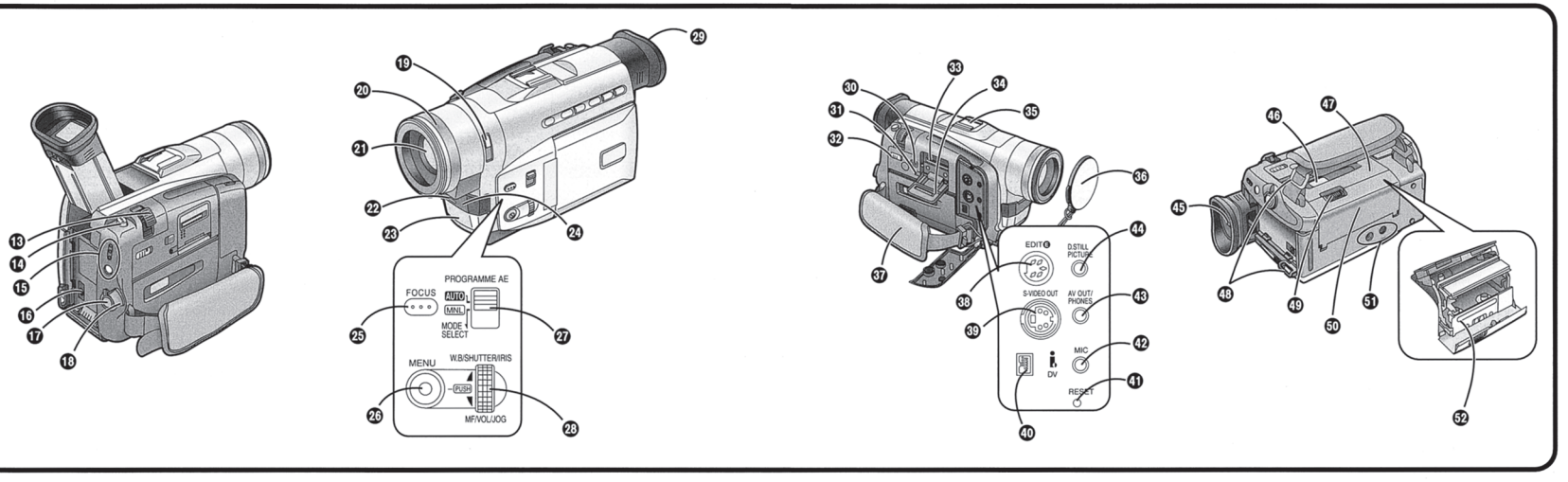
9 Speaker

10 Battery Holder

11 Battery Eject Button [PUSH]

12 Eyepiece Corrector Knob

Due to limitations in LCD production technology, there may be some tiny bright or dark spots on the LCD Monitor screen. However, this is not a malfunction and does not affect the recorded picture.



⑬ **Zoom Lever [W/T]**

⑭ **Photoshot Button [PHOTO SHOT]**

⑮ **Camera (Recording) Mode/VCR (Playback) Mode Button (and Lamps) [MODE]**

⑯ **DC Input Socket [DC IN]**

⑰ **Recording Start/Stop Button**

⑱ **Movie Camera Off/On Switch [OFF/ON]**

⑲ **0-Lux Recording Switch [0 LUX OFF/ON]**

⑳ **Lens Hood**

㉑ **Lens**

㉒ **Recording Indicating (Tally) Lamp**

㉓ **Microphone (built-in, stereo)**

㉔ **White Balance Sensor**
Remote Control Sensor
Built-in Infra-red Beam Emitters

㉕ **Focus Button [FOCUS]**

㉖ **Menu Button [MENU]**

㉗ **Mode Selector Switch [AUTO/MNL/MODE SELECT]**

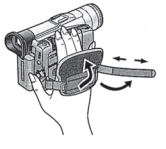
㉘ **Multi-Function Dial [PUSH]**

㉙ **Eyecup**

㉟ **Accessory Shoe**
To attach the Stereo Zoom Microphone (optional) or the Stereo Microphone (optional).

㊱ **Lens Cap**

㊲ **Grip Belt**
You can adjust the Grip Belt to the size of your hand. When you open or close the Cassette Compartment, push down the buckle of the Grip Belt so that it does not prevent the Cassette Compartment from opening and closing completely.



Pass your hand through the Grip Belt and adjust its length. Fold back the end of the Grip Belt to securely fasten the velcro tape closure.

㊳ **Edit Socket [EDIT]**

㊴ **S-Video Output Socket [S-VIDEO OUT]**

㊵ **DV Terminal (i.LINK) [i]**
Connect it to digital video equipment.
"i.LINK" is the name of the connector in accordance with the IEEE1394-1995.
"i" is the logo marked on products conforming with the "i.LINK" specifications.
(It is only possible to input digital signals with model NV-DS150.)

㊶ **Reset Button [RESET]**

㊷ **Microphone Socket [MIC]**
To connect an external microphone or audio equipment. (Connecting to this socket deactivates the built-in microphone.)

㊸ **Audio-Video Output Socket [AV OUT]**
Headphone Socket [PHONES]
When a cable is connected to this socket, the Movie Camera's built-in speaker• is turned off.

㊹ **Digital Still Picture Terminal [D.STILL PICTURE]**

㊺ **Viewfinder**

> Due to limitations in LCD production technology, there may be some tiny bright or dark spots on the Viewfinder screen. However, this is not a malfunction and does not affect the recorded picture.

㊻ **Cassette Compartment Window**

㊼ **Upper Cassette Compartment Cover**

㊽ **Shoulder Strap Holders**

㊾ **Cassette Eject Lever [OPEN/EJECT]**

㊿ **Lower Cassette Compartment Cover**

(51) **Tripod Receptacle**
To mount the Movie Camera on an optional tripod.

(52) **Cassette Holder**

	INITIAL/LOGO	ABBREVIATIONS
A	A GND	Analogue GND
	A HASW	Audio Head Amp Switching Pulse
	A HSW	Audio Switching Pulse
	A MUTE	Audio Mute
	A ORP	Audio Overlap Pulse
	A. TR	Auto Tracking
	A0-8, 0-17	Memory Address
	A3V2	AD Converter Reference Voltage
	AB0-4	Address Bus
	AB0-4, AB12-15	Address Bus Line 0-4, 12-15
	ABSF	Focus Encoder Input
	ACI	Analogue Channel Cording IC
	AD	AD Converter
	AD	Auto Date, Analogue Digital Converter
	AD CLK	AD Clock
	AD REC	Audio Delayed REC
	AD0-6	Address
	AD0-6, ADR0-6	Address Data Line
	ADCLK	Analogue Digital Converter Clock
	ADCNT	Analogue Digital Control
	ADCS	Analogue Digital Chip Select
	A-DET	Audio Detect
	ADREC	Audio Delaied Rec
	ADUB	Audio Dubbing
	AE	Auto Expose
	AECNT	Auto Expose Control
	AEE(H)	Audio E-E (H)
	AEH	Audio Erase Head
	AEIRQ	Auto Expose Interrupt Request
	AF/MF	Auto Focus/Manual Focus
	AF DIS CS	AF DIS Chip Select
	A-FADE(L)	Audio Fade (L)
	AF-AMP	AF HALL Bias
	AFCS	Auto Focus Chip Select
	AFRP	Audio PLL Voltage Control
	AF-VN	Zoom Encoder V-Ref (–)
	AF-VP	Zoom Encoder VREF (+)
	AGC	Automatic Gain Control
	AGCCNT	Automatic Gain Control Control
	AGND	Analogue Ground/Audio Ground
	AGS	Anti Ground Shooting
	AH(P) / (R)	Audio Head (Play) / (Record)
	AHASW	Audio Head Amp Switch Pulse
	AHSW	Audio Head Switch Pulse
	AI, AO	Buffer Input, Output
	AIBCK	Bit Clock (to A/D Converter)
	AIDAT	Serial Data (to A/D Converter)
	AILRCK	L/R Clock (to A/D Converter)
	AIMCK	Master Clock (to A/D Converter)
	ALC CNT	Auto Level Control Control
	ALC MAIN	Auto Level Control Drive
	ALE	Address Latch Enable
	A-LOCK	Full Auto Switch
	A-MUT(H)	Audio Mute (H)
	ANLPTH	Analogue Loop Through High
	AORP	Audio Overlap Pulse
	APCNT	Aperture Control
	APS	Auto Power Save
	ART VH	Artifical Vertical Sync
	AT CNT	Automatic Tracking Gain Adjust
	ATF	Automatic Track Finding
	ATFCLK	41.85MHz Clock
	ATFG	Auto Track Gain
	ATL	Auto Lock Select
	ATN	Absolute Track Number
	ATR OFF(H)	Auto Tracking Off (H)
	ATV	Advanced TV
	AUDIO(N)	Audio (Normal)
	AUX	Auxiliary
	AVDD	Analogue VDD
	AVSS	Analogue Ground
	AWTB	Auto White Balance B-Y
	AWTR	Auto White Balance R-Y
B	BACK	Back-up
	BACK UP	Microcomputer Back-up
	BACK VDD	Back-up Power
	BATT	Battery
	BATT ALARM	Battery Alarm
	BATT REF	Reference Voltage for Battery
	BCB	B Carrier Balance
	BCBM(B-Y)	B-Y Carrier Balance
	BCBM(R-Y)	R-Y Carrier Balance
	BD0-7	REC/Play In/Out Buss
	BDCK	Standard Bus Data Clock (9MHz)
	BDEN	Standard Bus Data Enable
	BEND	Data Block End Request
	BF	Burst Flag Pulse
	BFA	Burst Flag Pulse for Encorder
	BFO/BFI	Burst Flug Input/Output
	BI, BO	Buffer Input, Output
	BL	Back Light
	BL ON	Back Light ON (L)
	BL4V	Back Light 4V
	BLC 0, 1	Back Light Y Control Out, In
	BLDI/O	Back Light Drive Input/Output
	BLK	Blanking Pulse
	BLKA	Blanking for Encorder
	BLKA	Blanking Pulse for Encorder
	BLKI/O	Blanking Pulse In/Out

	INITIAL/LOGO	ABBREVIATIONS
	BLKZ	Blanking Pulse for Zoom Encorder
	BM	Balance Modulator
	BQUIET	Bus Out Control Signal
	BUF IN/OUT	Buffer In/Out
	B-Y KB	B-Y Carrier Balance
	B-YO	B-Y Signal Out
C	C A In/Out	Pre-Aperture In/Out
	CAPSTP	Capstan Stop Flag
	C CNT	Colour Control
	C SYNC	Composite Sync Signal
	C/N	Carrier/Noise
	C0-7, C00-07	Chrominance Signal 0-7
	CAGAIN	Aperture Gain Control
	CAM	Camera
	CAM CLK	Camera Clock
	CAM RST	Camera Reset
	CAM SIOC	Camera Serial In/Out Contol
	CAM T	Camera Test
	CAM TL	Capstan Trque Limit
	CAP EC	Capstan Trque Control
	CAP P(H)	Capstan Power On (H)
	CAP R/F/S	Capstan Reverse (H)/Stop (M)/Forward (L)
	CAP SW	Capstan Power Control Switch
	CAPSTP H	Capstan Stop Flag (Stop High)
	CAPVM	Capstan Motor Current
	CAPVS	Capstan Motor Power Control Switch
	CAS	Compresion, Audio Process, Shuffling/Deshuffling
	CAS	Memory Address Strobe (Active Low)
	CASDOWN, DWN	Cassette Down (L)
	CB, CR	Chroma B, Chroma R
	CBLK	Composite Blanking Pulse
	CC	Channel Cording
	CCA	Curent Drive Control
	CCA	Current Control Amp
	CCD	Charge Coupled Devise
	CCW	Counterclockwise
	CD SP0-7	Digital Chroma
	CDS	Correlate Double Sampling Signal
	CDS1, 2	Sampling Pulse for CCD Output Signal
	CE	Chip Enable
	CE	Control Pulse Erase
	CEC	Capstan Error Code
	C-ERA(H)	Control Erase (H)
	CFEM	Chrominance Memory Signal
	CFM	Chrominance Field Memory
	CFM1-4	Chroma Field Memory Signal
	CG CLK	Character Generator Clock
	CG CLK DATA	Clock Generator Data
	CG DATA	Character Generator Data
	CGC	Chrominance Gain Control
	CGCS	Character Generator Chip Select
	CGO	Character Generator Serial Data
	CH	Charge

	INITIAL/LOGO	ABBREVIATIONS
	CH1	Channel 1 (Odd Field)
	CHR	Character
	CHR BACK	Character Back-up
	CHR MIX	Character Mix
	CI, CO	Buffer In/Out
	CI,CO	Buffer Input & Output
	CIF	Control Signal Forward Input
	CIF, CIR	Positive Control Pulse, Negative Control Pulse
	CIR	Control Signal Reverse Input
	CK	Clock
	CL/CLK	Clock
	CLASS	Classeffication Signal for Compress (DCT/VLC)
	CLASS 0.1	Class Control Signal Durring DCT/VLC
	CLK135	13.5MHz System Clock
	CLK18	18MHz System Clock
	CLK2	Clock 2 (824XFH: 12.875MHz)
	CLK246	24.576MHz Clock
	CLK27	27MHz System Clock
	CLK450	450KHz Clock
	CLKDCLK	Digital Clock
	CLK-PH	Clock Phase Control
	CLK-REF	Reference Clock
	CLP-RST-H	Clamp Reset High Signal
	CLX	TFT X-axis Transmission Clock
	CLX, CLX1-4	Shift Clock for X Direction (LCD Panel)
	CLY	Shift Clock for Y Direction (LCD Panel)
	CLY	TFT Y-axis Transmission Clock
	CLY FG	Cylinder FG Signal
	CMEMO0-3	Chroma Memory Output Signal 0-3
	CMIX	Character Mix
	CMO	Chrominance Memory Output
	COMPC	Position Detection Pulse
	COM RDY	Serial Enable Signal
	CMODE	Camera Mode
	CNCLK	Clock
	CNR	Chrominance Noise Reduction
	CNT, CONT	Control
	CO	Control Out
	CO0-7	Chrominance Output 0 to 7 (Digital)
	COM	Common
	COM RDY	Serial Transmission Enable
	COMB	Comb Filter
	COS EQ	Cosin Equalizer
	CP	Clamp Pulse
	CP ON(H)	Camera Power On(H)
	CP2, 20	Clamp Pulse
	CP2A, CP2O	Encoder Clamp Pulse
	CPN	Component Signal
	CPOB	Clamp Pulse for Optical Blanking
	CPS	Composite Signal
	CPV	Gate Scan Clock
	CR OUT	Pre Apature Out
	CR POW SW	Camera Remote Power On Switch
	CRA	Aperture Gain Control

	INITIAL/LOGO	ABBREVIATIONS
	CRA	Pre Apature Gain Control
	CRST	Camera Reset
	CS	Chip Select
	CS 0-7	Chrominance Signal Out 0-7
	CSEL	Clock Phase Select
	CSI 0-7	Chrominance Signal In 0-7
	CTSW	Crosstalk Switch
	CURR	Current
	CW	Clockwise
	CYL EC	Cylinder Motor Trque Control
	CYL PG	Cylinder Motor PG
	CYL VM	Cylinder Motor Current or Power
D	D CLK	Digital Clock
	D MODE	Digital Mode Switch Signal
	D01-03	Zoom 01-03
	DA UV SEL	D/A Convertor U/V Select
	DAC	Digital Analogue Converter
	DAG	Digital Analogue Ground
	DB0-7	Data 0-7
	DB0-7	Microprocessor Data
	DCC	DC Clamp Control
	DCCNT	DC Control
	DCI	Digital Channel Cording IC
	DCLR	Digital Clear
	DCP	Digital Clamp Pulse
	DCS-CLK, DA	CAS & DV I/F Serial Clock
	DC-STP1	DCS Serial Start
	DC-STP2	DCS Serial Stop
	DCT	Discrete Cosine Transform (Compression)
	DCX7	Serial Data
	DEDP 0-3	Playback Data
	DEDR 0-3	Rec Data
	DEMO	Demodulation
	DEMP	A/D Convertor Empahsis Control
	DEMP	De-Emphasis
	DFD 0-7	Encode Data In/Out Between Shaffling Memory
	DFD0-7	Encode Input/Output Signal for Shuffling Memory
	DIBDCK	Bit Clock
	DICLK	Digital Clock
	DIDAT	Serial Data
	DIDAT	Serial Data Durring Digital Audio In
	DIF	Digital Interface
	DILRCK	L/R Clock
	DILRCK	Serial Clock Durring Digital Audio In
	DIMCK	Master Clock
	DIMCK	Mater Clock Durring Digital Audio In
	DIO 1-8	Data In/Out
	DIOS	Data In/Out Select Control Signal
	DIOS	Select Signal for Digital In/Out
	DIS	Digital Image Stabilizer
	DIS R/B	Digital Image Stabilizer Read (H)/Busy (L)
	DIS R/B	DIS IC Rady/Busy
	DIS/KAND	Digital Image Stabilizer/Sensitivity
	DISCS	Dis Chip Select
	DISP	Display
	DL	Delay Line
	DOBCK	Audio A/D Convertor Bit Clock
	DOCTL	Data Output Control Signal
	DODAT	Serial Data (to D/A Converter)
	DOLRCK	Audio A/D Converter LR Clock
	DOLRCK	L/R Clock (to D/A Converter)
	DOMCK	Audio A/D Converter Master Clock
	DOMCK	Master Clock (to D/A Converter)
	DQ 1-16	Memory Data
	DRAM CAS	D-RAM Colum Address Strobe
	DRAM OE	D-RAM Out Enable
	DRAM RAS	D-RAM Read Address Strobe
	DREC	AV Delayed REC Start Pulse
	DRK	Dark (LPF Switch for Auto Focus)
	DS1, 2	Double Sampling Pulse
	DSF 0-7	Data In/Out for Shaffling Memory
	DSF 0-7	Input/Output Data to Shuffling Memory (18MHz)
	DSP	Digital Signal Processor
	DSP R/B	DSP IC Rady/Busy
	DSP-48K-H	DSP IC Clock Select
	DSTB	Data Stobe Signal
	DSV	Digital Sum Variation
	DV	Digital Video
	DVB	Digital Video Broadcast
	DVC	Digital Video Cassette
	DVDD	Digital VDD
	DVIO	Digital Video Input Output
	DVSS	Digital Ground
	DX	Shift Data for X Direction (for LCD)
	DY	Shift Data for Y Direction (for LCD)
	DY	TFT Y-axis Shift Data
	DZ	Digital Zoom
E	E Snap	Electric Snap Shot
	E ZM	Electric Zoom
	E2 CS or E2P CS	EEPROM Chip Select
	E2 R/B	EEPROM Rady/Busy
	E2P	EEPROM
	EARP	Earphone
	EC	Torque Control
	ECC	Error Correction Cording
	ECM	Electric Condencer Mic
	ECR	Reference Voltage for Capstan Torque
	EDA	Error Correction, DCI, ATF Servo
	EE CS	EEPROM Chip Select
	EE R/B	EEPROM Read (H)/Busy (L)
	EEPROM	Electric Erasable Programable Read Only Memory
	EIS	Electric Image Stabilizer (DIS)
	EMP	A/D Convertor Emphasis Control
	ENAB	Enable
	ENV	Enverope
	EOB	End of Block

	INITIAL/LOGO	ABBREVIATIONS
	EQ	Equalizer
	EVF	Electric View Finder
	EXT DC	External DC (AC Adaptor)
	EXT DC(H)	AC Adaptor DC (H)
	EXT NOREG	AC Adaptor 6V
	EXT S DATA	Serial Data for Edit
	EXT SCK	Serial Clock for Edit
	EZOOM	Electric Zoom
F		
	F ENC	Lens F-Value
	FACT MODE	Factry Mode (not used in the service)
	FB	Feed Back
	FC	Saw Tooth Signal In
	FCK	Clock
	FCO	Saw Tooth Signal Generator
	FENC	Focus Encoder
	FEND	Frame End Pulse
	FH2B	FH/2 (15.625KHz / 2=7.8125KHz)
	FIX OSD	Auto Tracking Off (H)
	FLICK	Flicker Output
	FM	Field Memory
	FM0-7	Field Memory 0-7
	FMCO0-3	Field Memory Chrominance Out 0-4
	FMDIR	Focus Motor Direction
	FMOEM	Field Memory Enable
	FMOEO	Field Memory Enable
	FMT1-4	Focus Motor Terminal 1-4
	FMY00-07	Field Memory Luminance Out 0-7
	FMYI0-07	Field Memory Luminance In 0-7
	FNO	F Value
	FPS	Frame Refference Signal
	FR	Capstan Reverse High
	FRP	Frame Refference Pulse
	FRPSO	Frame Start Pulse
G	G1, G2, G3	Gap 1, 2 and 3
	GCA	Gain Control AMP
	GCNT	Gain Control
	G-CNT	AGC Adjustment
	GCTRL	Gain Control
	GENE	Generator
	GF	FG AMP Terminal
	GSW	Ground for Switching Power
H	H/M/N	Hi-Fi / Mix / Normal
	H/N	Hi-Fi / Normal
	H1, 2	H. CCD Drive Pulse
	HAP	Horizontal Aperture
	HASW	Head AMP Switching Pulse
	HB	Hall Bias
	HBR SET	High Brightness Set
	HBRST	High Brightness Set
	HCLR	High Clear
	HCP	Shift Clock for Horizontal Drive

	INITIAL/LOGO	ABBREVIATIONS
	HD	Horizontal Drive Pulse
	HDTV	High Definition TV
	HEX	Hexadecimal
	HG	Hall Gain
	HID	Head Switching Pulse
	HLT	High Bright Signal
	HALL IN(+), (–)	Input Signal from Hall IC
	HP	Headphone
	HPF	High Pass Filter
	HSE	Modulated Data Output
	HSP	Timing Pulse for Shaffling Memory
	HSS	Horizontal Sync Signal
	HSW	Head Switching Pulse
	HS-WT	High Speed Zoom
	HSZ	High Speed Zoom
I	I/F	Interface
	I-2 C	Inter Integrated Circuit
	ID(H)	Wide Television (H)
	IMP	Inter Microprocessor Protocol
	INF	CCD Input Signal 1
	INF	Input Frame Signal
	INS	CCD Input SIgnal 2
	INTER	Interval Recording
	INV	Inverter
	IOU	R-Y Analogue Signal Output
	IOV	B-Y Analogue Signal Output
	IOY	Y Analogue Signal Output
	IR	Infrared Rays
	IRDET	Imfrared Ray Detection
	IREF	Current Adjustment Terminal
	IRIS/SH	Iris / Shutter Control
	IRQ	Interrupt Request
	ITI	Insert & Track Information
J	JPEG	Joint Photographic Image Cording Experts Group
K	KANDO	Digital Gain Up
	KB	Carrier Balance
	KEY IN	Key Scan
	KND	Digital Gain Up
	KNEE	Luminance Compensate
L	LCD	Liquid Crystal Display
	LCD P(L)	LCD Power On (L)
	LD	Load Pulse
	LDD	Liquid Direct Drive
	LEDCNT	LED Control
	LI-BATT	Lithium Battery
	LOAD	Loading
	LOAD F, R	Loading Direction (F: Forward / R: Reverse)
	LPF	Low Pass Filter
	LRMONO	Monoral Audio (L + R)
	LSB	Least Significant Bit

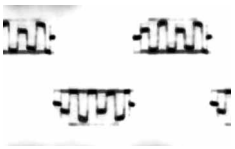
INITIAL/LOGO		ABBREVIATIONS
	LVL	LPF Switch for Auto Focus
M	M1-3	Motor Coil Terminal 1 to 3
	MA0-5	Microprocessor Address Data 0-5
	Mbps	Megahertz Bit Per Second
	MD	Modulation
	MD0-7	Microprocessor Data 0-7
	MDT0-7	Microprocessor Data 0-7
	ME (TAPE)	Metal Evaporated (Tape)
	MENB	Focus Motor Enable
	MFF	Manual Focus Far
	MFN	Manual Focus Near
	MHSYNC	Monitor Horizontal Sync Signal
	MIC	Memory In Cassette
	MIG	Meta In Gap
	MIX N.R.D.	Non Rec Data Mix
	MOD	Modulation
	MOUT	Mic Out
	MP (TAPE)	Metal Particle (Tape)
	MPEG	Moving Picture Image Cording Experts Group
	MPEG2	Moving Picture Image Cording Experts Group Phase 2
	MRST	Focus Motor Reset
	MSB	Most Signal Bit
	MVSYNC	Monitor Vertical Sync Signal
N	N/F	Near/Far Focus
	N/P	NTSC/PAL
	NB1-3	Base for NPN Transistor
	NC	No Connection
	NC1-3	Corrector of NPN Transistor
	NCLR	Power On Reset
	NCP1	Clamp Pulse
	NCP2+VDH	Clamp Pulse + Horizontal Drive Pulse
	NCP2+VDM	Clamp Pulse + Gate Pulse
	NDE	Non Liner De-Emphasis
	NE	Emitor of NPN Transistor
	NLE	Non Liner Emphasis
	NR	Noise Reduction
	NRD	Non Rec Data
	NRD BLK	Non Rec Data Blanking
	NRD CLK	No Rec Data Clock
	NRE	Read Enable Input (Low Active)
	NWE	Write Enable (Low Active)
O	OB	Optical Black
	OBCNT	Optical Black Control
	OBREF	Reference Voltage for Optical Black Control
	OE	Output Enable
	OFH	Horizontal Counted Down Clock Signal (Reference)
	OFS	Offset
	OP	Operation AMP Output
	OSD	ON Screen Display
	OVL	Overlap Pulse
	OZ	Optical Zoom

INITIAL/LOGO		ABBREVIATIONS
P	P SW	Power Switch
	PB1-3	PNP Base 1-3
	PBCTL	Play Back Control
	PBCTL	Pre-Branking Control
	PBH	Head Amp Switch
	PBLK	Pre-Blanking (Pulse)
	PC1-3	Corrector of PNP Transistor
	PCBM	Carrier Balance
	PCH	Phase Compensator (Hall AMP)
	PCI	Phase Compensator (Current)
	PCO	Phase Compensator Out
	PCS	Switching Power Control
	PCV	Phase Compensator (Voltage)
	PE	Emitter of PNP Transistor
	PED	Pedestal
	PEDECNT	Pedestal Control
	PENO	Alarm (L)
	PFP	Pilot Frame Position
	PGA, B	Power Ground A, B
	PGC	Pulse Generator Comparator
	PGI	Pulse Generator Input
	PGMM	Pulse Generator Monostable Multivibrator
	PGO	Output of Pulse Generator AMP
	PMODE	Select Signal for Normal / Wide Screen
	PON	Power On
	POR	Power On Reset
	POSCOM	Common Position
	PREAMP	Pre-AMP
	PREBLK	Pre-Blanking
	PT	Protect for V Voltage
	PWM	Pulse Width Modulation
	PWMB	Pulse Width Modulation Pulse
Q	Q2H	Source Output Select
R	R CTL P	Recorded Control Pulse (+)
	R CTL R	Recorded Control Pulse (–)
	R/B	Read/Busy
	R/L	Direction Control for Data Transmition
	RA	Recording AMP
	RA1	Rec AMP 1
	RAC AC	Rec Audio Current
	RAD	Read Address Data
	RAE	Read Address Enable
	RB	Read Busy
	R-B	R Bias
	RCB	R Carrier Balance
	RE	Read Enable
	RE(F), (S)	Rotary Erase Head Transformer
	REB	R Bias
	REC CC	Rec Current Control
	REC CCNT	Rec Current Control
	RECCTRL	Recording Control Pulse
	RECI	Rec Amp Switch

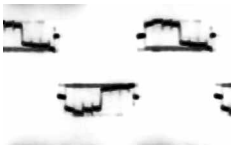
INITIAL/LOGO		ABBREVIATIONS
	RENCF	Lens Control (Forward)
	RENCR	Lens Control (Reverse)
	RERASE	Rotary Erase Head
	RGBIV1-2	1V Inverted Signal 1-2
	RGO R/G OFF	Offset Voltage for AWT R
	RSF	Capstan Direction (Reverse / Stop / Forward)
	RST	Reset
	RSTB	R Strobe
	RSTPWD	Reset Power Down Input
	RSTR	Reset Read
	RSTW	Reset Write
	RT	Saw Tooth Terminal
	RVCO	Resister for Oscillation
	RW	Read Write
	RWAE	Read Write Enable
S	S PHOT	Supply Photo Transistor
	S/H	Sampling Hold
	S/S	Start/Stop
	SBD	Serial Data
	SBI	Serial Data Input
	SBO	Serial Data Output
	SBT	Serial Clock
	SCAN0-5	Key Scan 0-5
	SCK	Serial Clock
	SCR	Search
	SCR, S.C.R.	Still Cue Review
	SEG.	Segment
	SET	White Balance Set
	SH/IRIS	Shutter/Iris Control
	SHIFT	Capasitor for Phase Shift
	SI	Serial Data Input
	SIC	Shift In Clock Input
	SIOC	Serial In/Out Control
	SMCE	Shaffling Memory Chip Enable
	SMRS	Shaffling Memory Read Strobe
	SMWE	Shaffling Memory Write Enable
	SMWS	Shaffling Memory Read Strobe
	SNAP	Snap Shot
	SNS LED	Sensor LED
	SO	Serial Data Output
	SPA	ATF Smapling Pulse
	SPEN	8 Bit Shift Register Enable
	SPK	Speaker
	SPO	Reset for Switcing Power
	SPST	8 Bit Shift Register Strobe
	SREELP	Supply Reel Pulse
	SRT	Start
	SSA	Start Sync block Area
	SSW	Select Signal for Low Pass Filter
	ST5V	Safety Tab 5V
	STAB	Safety Tab Switch
	STB	Stand by Signal
	STB	Strobe
	SWB	Switching Pre-Drive Pulse
	SYL EC	Cylinder Torque Control
	SYL FG	Cylinder FG
T	T PHOT	Take-up Photo Transistor
	TBC	Time Base Conntrol
	TFT	Thim Film Transistor
	TH	Thermostat for Battery
	TI	Test Mode Select
	TL	Torque Limit
	TM	Sub Code
	TMD	Sub Code Data
	TRE	Tracking Error Signal
	TREEL(P)	Take-up Reel (Pulse)
	TRFIX	Tracking Fix
	TRIWAVE	Tracking Wave
	TRP	Tracking Position
	TRP	Trap
	TSR	Head Switching Refference
	TST	Time Scale Transfer
U	U/V SEL	R-Y/B-Y Select Signal
	UNLOAD	Un-Loading
	UNRE	Microprocessor Read Enable
	UNWE	Microprocessor Write Enable
	UV	R-Y/B-Y
	UV SEL	R-Y/B-Y Select Signal
V	V1-V4	V. CCD Drive Pulse
	VB	VH Filter Switching
	VCE	Power Terminal
	VCNTL	Video Control
	VCO	Voltage Control Oscillator
	VCP	Shift Clock Output for Vertical Drive
	VCTLD	Video Control
	VCTRL	Voltage Charge Control
	VD	Vertical Drive Pulse
	VDDX	X Drive Power for Colour LCD
	VDDXY	XY Drive Power for Colour LCD
	VDDY	Y Drive Power for Colour LCD
	VDREC	Video Delayed Rec
	Vgg	Voltage for Gate IC
	Vgl	Gate off Voltage
	VID	Video Signal Out
	VIN	Video In
	VITC	Vertical Interval Time Code
	VITERBI	One of Signal Detection Method
	VL	Low Voltage
	VLC	Variable Length Cording
	VLOCKP	Artificial Sync Pulse
	VLP	Artificial Sync Pulse
	VM	Motor Voltage
	VMD	Velocity Mode Data
	VMD1-3	Electric Shutter Mode

INITIAL/LOGO		ABBREVIATIONS
	VMODE	NTSC/PAL Select Switch
	VMVH	VH Filter Switching
	VORP	Video Overlap
	VRB	Voltage Refference Bottom
	VRBS	Voltage Refference Bottom Output
	VREF1R3V	Refference Voltage 1.3V
	VREF3R3V	Refference Voltage 3.3V
	VREFH	Refference Voltage High Side
	VREFL	Refference Voltage Low Side
	VRI	Refference Voltage Input
	VRO	Refference Voltage Output
	VRT	Voltage Refference Top
	VRTS	Voltage Refference Top Output
	VS	Switching Comparator
	VSS	Vertical Sync Signal
	VSSX	X Driver Power for Colour LCD
	VSSXY	X-Y Driver Power for Colour LCD
W	W/N	Mode Select for Window Mode
	W/N	Wide / Normal
	WAD	Write Address Enable
	WAE	Write Address Enable
	WAERAE	Write Address Enable
	WARI	Interrupt
	WB	White Balance
	WE	Write Enable
	WEM	Memory Write Enable
	WHD	Wide Horizontal Drive Pulse
	WIDE A	Wide Zoom
	WSB	B AGC Control
	WSR	R AGC Control
	WTV	Wide TV
X	XP	FG Logic Reset
Y	Y FM0-7	Y Field Memory 0-7
	YCE	Cylinder Error Code
	YGC	Y Gain Control
	YMO 0-7	Y Field Memory 0-7
	YNCST	Noize Canceller
	YNR	Luminance Noise Reduction
	YSDP 0-7	Digital Y Out 0-7
Z	Z.ENC	Zoom Encoder
	Z.MIC	Zoom Mic
	ZENC	Zoom Encoder Output
	ZMDIR	Zoom Drive
	ZMEN	Zoom Enable
	ZMT	Zoom Motor Tele Side
	ZMT (+)/(–)	Zoom Motor (+)/(–)
	ZMTER	Zoom Motor Tele Side
	ZMW	Zoom Motor Wide Side
	ZSW	Zoom Switch

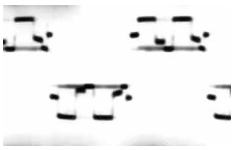
INITIAL/LOGO	ABBREVIATIONS



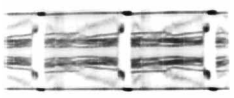
IC901-11 STOP
10.8 Vp-p (20µsec./div.)
COLOUR BAR



IC901-14 STOP
10.8 Vp-p (20µsec./div.)
COLOUR BAR

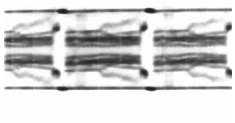


IC901-16 STOP
10.8 Vp-p (20µsec./div.)
COLOUR BAR



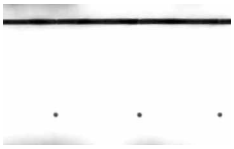
IC901-2 STOP
3.4 Vp-p (5msec./div.)
COLOUR BAR

IC901-48 STOP
3.4 Vp-p (5msec./div.)
COLOUR BAR

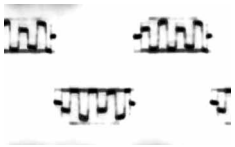


IC901-1 STOP
3.6 Vp-p (5msec./div.)
COLOUR BAR

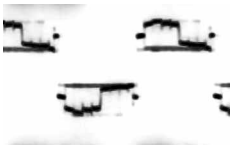
IC901-47 STOP
7.0 Vp-p (20µsec./div.)
COLOUR BAR



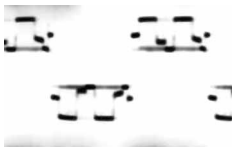
IC901-46 STOP
3.0 Vp-p (5msec./div.)
COLOUR BAR



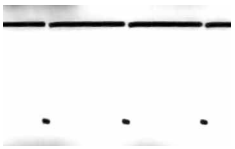
FP802-7 STOP
8.0 Vp-p (20µsec./div.)
COLOUR BAR



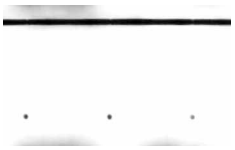
FP802-6 STOP
8.0 Vp-p (20µsec./div.)
COLOUR BAR



FP802-5 STOP
8.0 Vp-p (20µsec./div.)
COLOUR BAR



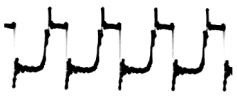
IC801-2 STOP
2.8 Vp-p (20µsec./div.)
COLOUR BAR



IC801-3 STOP
2.8 Vp-p (5msec./div.)
COLOUR BAR

IC1001-4 STOP
1.0 Vp-p (1µsec./div.)

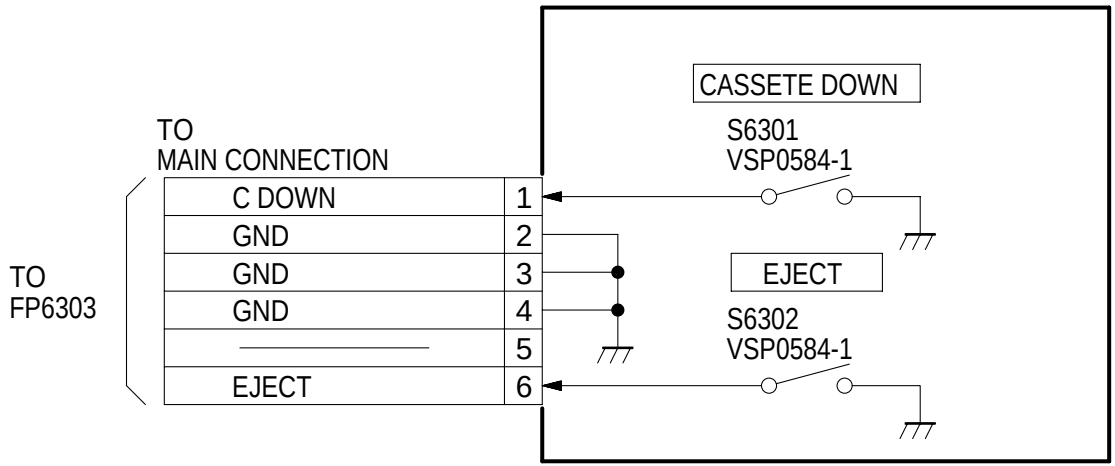
IC1001-46 STOP
1.2 Vp-p (0.5µsec./div.)



IC1001-56 STOP
1.4 Vp-p (0.5µsec./div.)

IC1001-57 STOP
1.0 Vp-p (0.5µsec./div.)

IC1001-64 STOP
1.0 Vp-p (0.5µsec./div.)



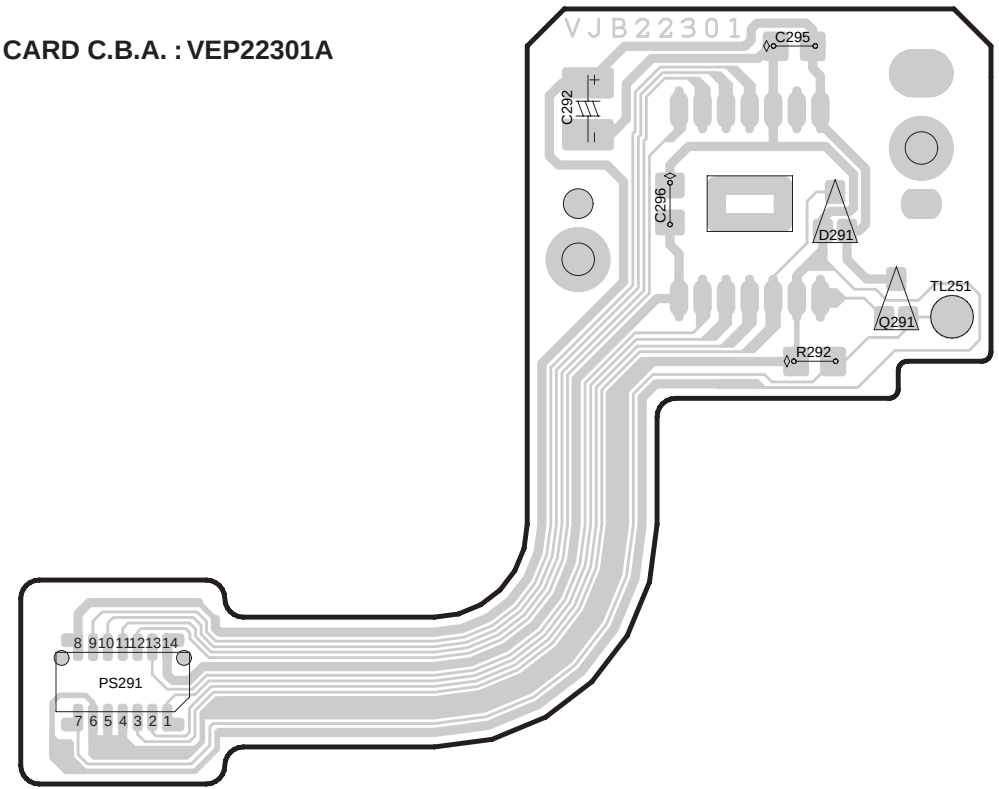
NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

A

1

2

CCD FLEX. CARD C.B.A. : VEP22301A

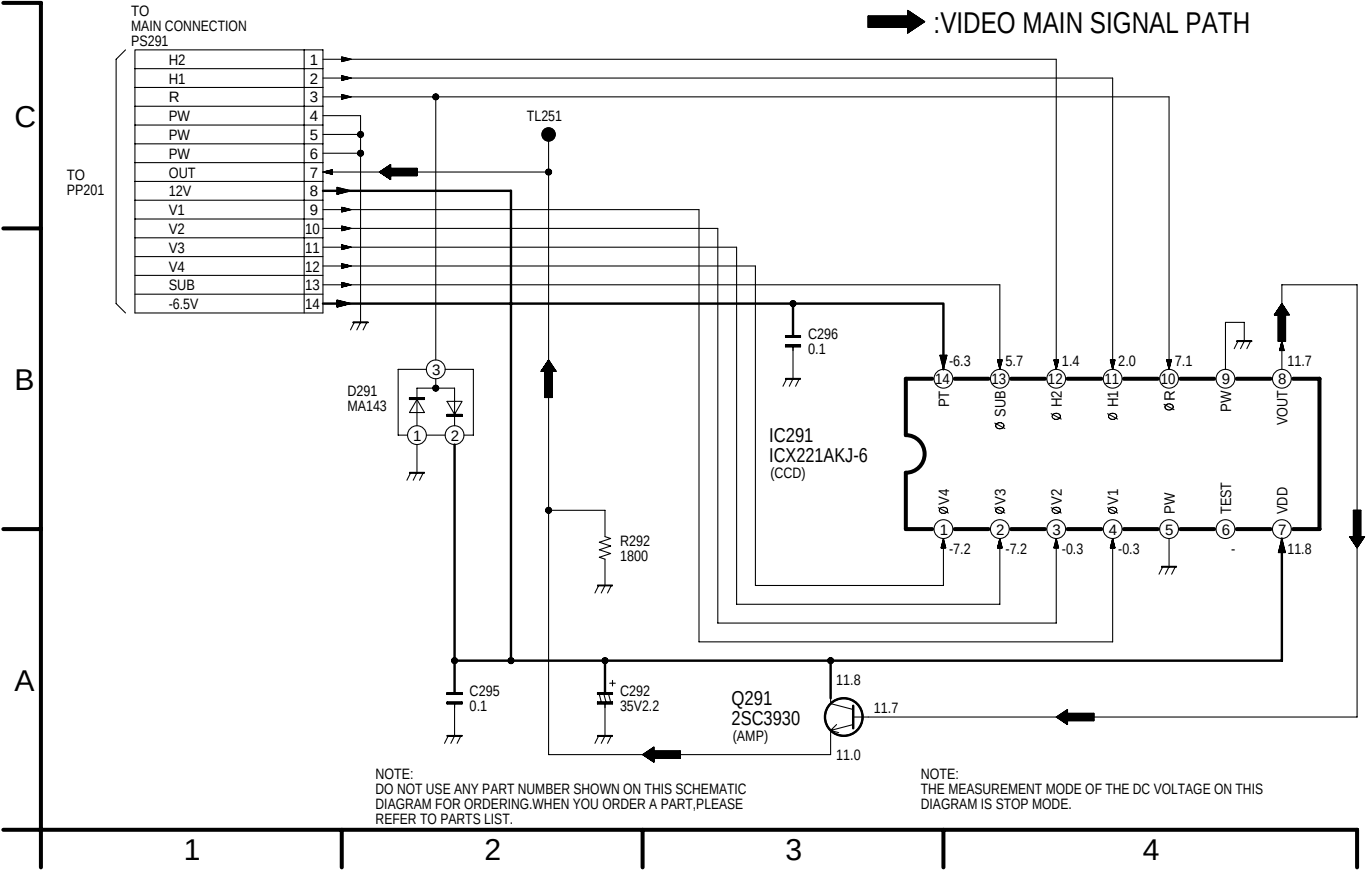


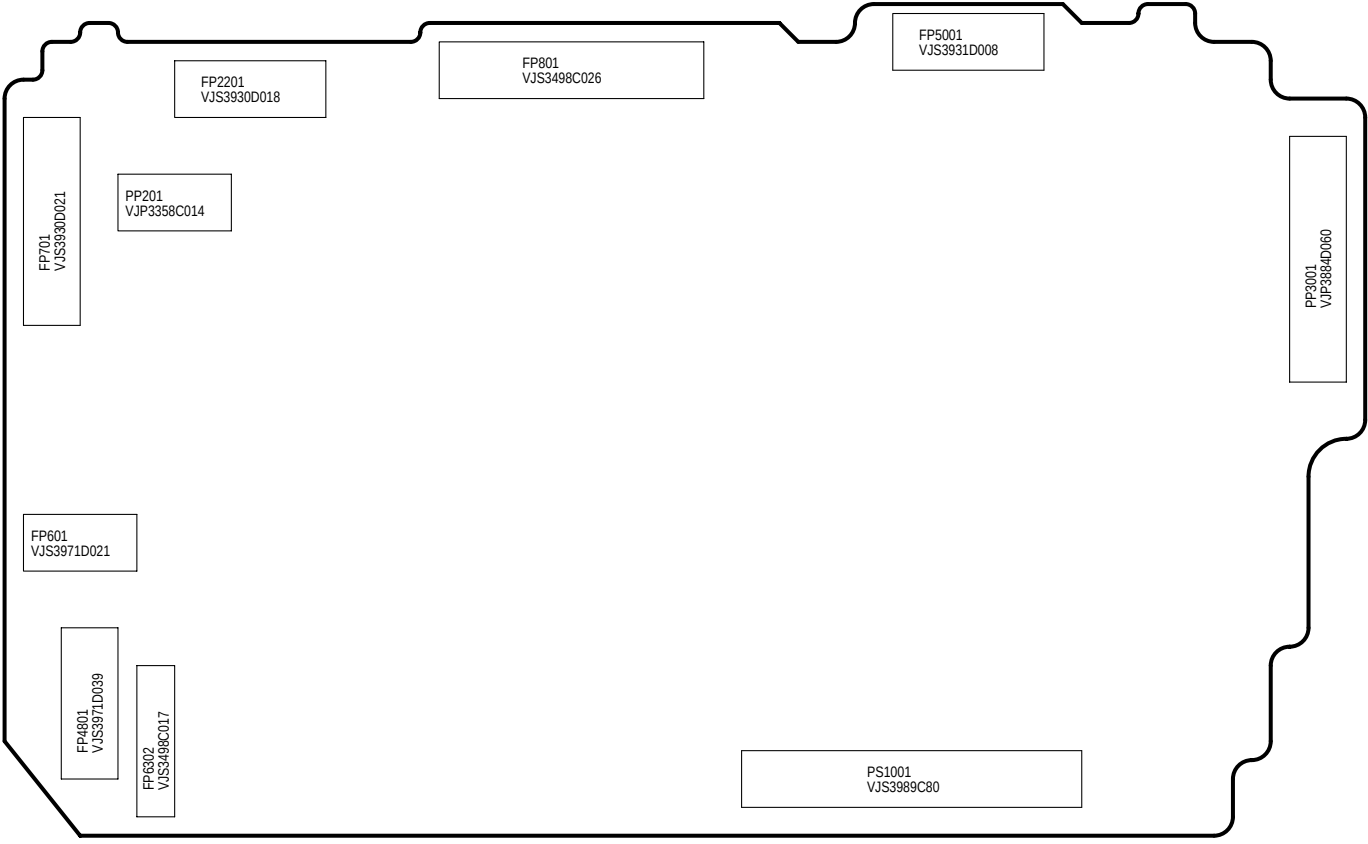
C

B

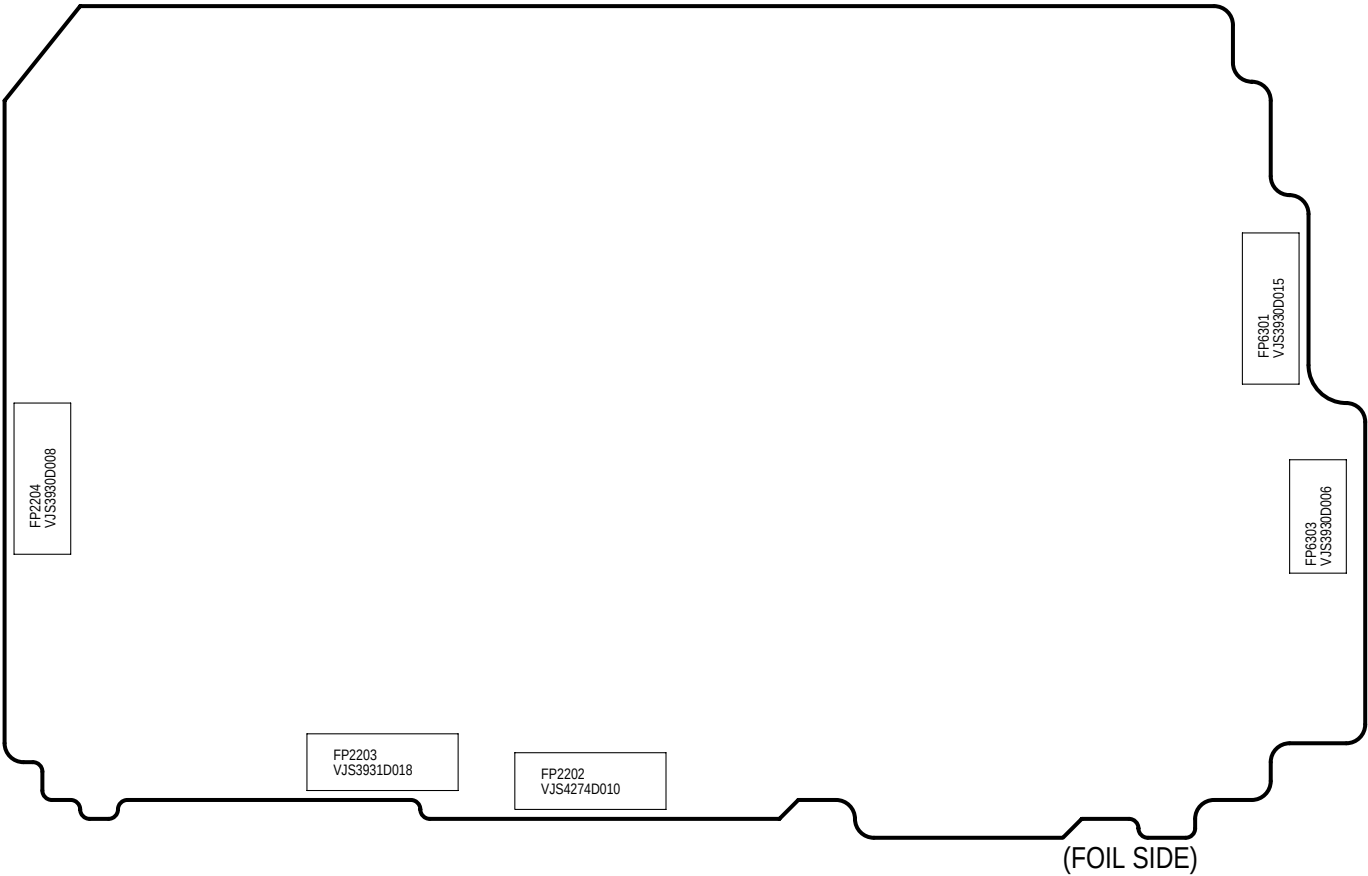
A

1 2 3 4


:VIDEO MAIN SIGNAL PATH
TO
MAIN CONNECTION
PS291
H2 1
H1 2
R 3
PW 4
PW 5
PW 6
OUT 7
12V 8
V1 9
V2 10
V3 11
V4 12
SUB 13
-6.5V 14
TO
PP201
TL251
C296
0.1
D291
MA143
IC291
ICX221AKJ-6
(CCD)
14 PT -6.3
13 Ø SUB 5.7
12 Ø H2 1.4
11 Ø H1 2.0
10 ØR 7.1
9 PW
8 VOUT 11.7
1 ØV4 -7.2
2 ØV3 -7.2
3 ØV2 -0.3
4 ØV1 -0.3
5 PW
6 TEST -
7 VDD 11.8
R292
1800
C295
0.1
C292
35V2.2
Q291
2SC3930
(AMP)
11.8
11.7
11.0
NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.
NOTE:
THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.
C
B
A
1
2
3
4

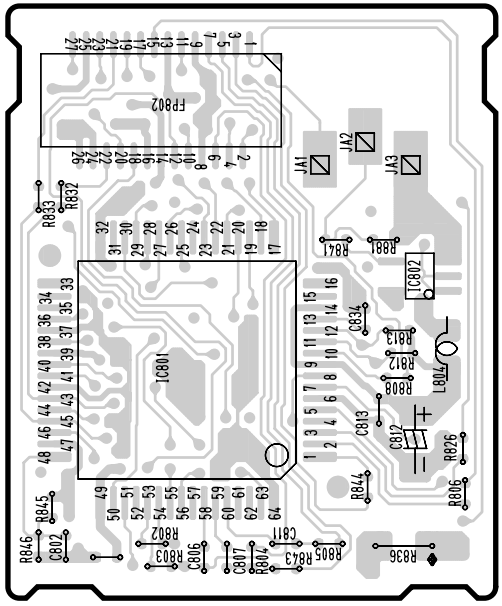


(COMPONENT SIDE)

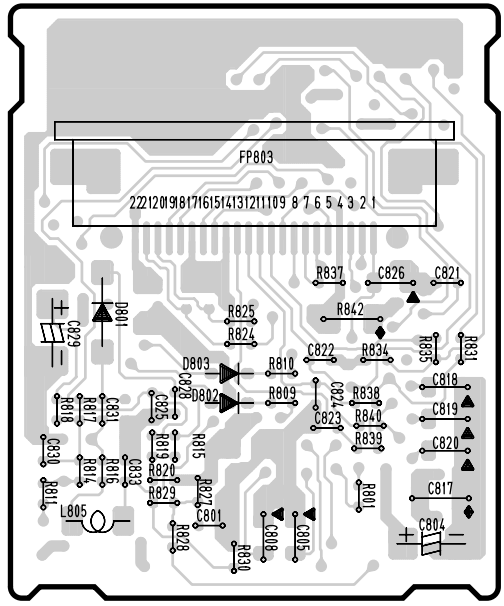


(FOIL SIDE)

E.V.F. (A) C.B.A. : VEP28276A

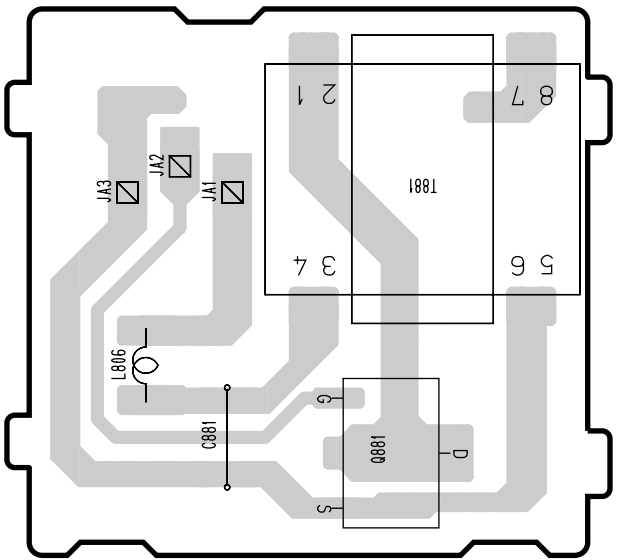


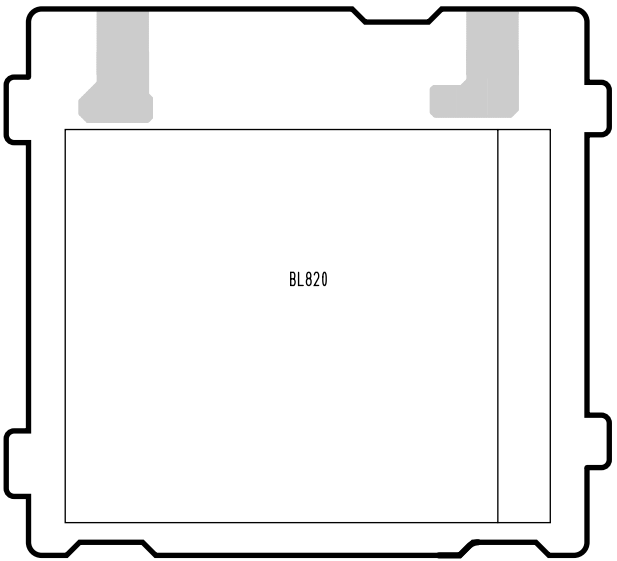
(COMPONENT SIDE)



(FOIL SIDE)

E.V.F. (B) C.B.A. : VEP28277A





(COMPONENT SIDE) (FOIL SIDE)

C B A

1 2 3 4

:VIDEO MAIN SIGNAL PATH

TO MAIN CONNECTION FP802

FP801-26	EVF HD	1
FP801-25	EVF VD	2
FP801-24	CLAMP	3
FP801-23	E PLL	4
FP801-22	EVF R	5
FP801-21	EVF G	6
FP801-20	EVF B	7
FP801-19	GND	8
FP801-18	GND	9
FP801-17	E CHR R	10
FP801-16	E CHR G	11
FP801-15	E CHR B	12
FP801-14	EVF 5V	13
FP801-13	EVF 3V	14
FP801-12	MON E PLL	15
FP801-11	EVF 12V	16
FP801-10	EVF CS	17
FP801-9	EVF SD	18
FP801-8	EVF S CLK	19
FP801-7	E BL 6V	20
FP801-6	MON E R OUT	21
FP801-5	MON E G OUT	22
FP801-4	MON E B OUT	23
FP801-2,3	NOREG GND	24
FP801-2,3	NOREG GND	25
FP801-2,3	NOREG GND	26
FP801-1	MON E FRP	27

R806 1K, R826 1K, R844 1K, R811 1K, R842 4.7, R808 1K, R809 1K, R810 1K, R833 100, R832 100, R831 100, R835 15K, R834 10K, R836 0, C803 0.01, C804 6V10, L804 10u

C826 1, R845 39K, R846 33K, C802 0.01

R838 100, R840 100, R839 100, C823 470P, C824 470P, C822 470P

C820 0.47, C819 0.47, C818 0.47, C817 ECUV1C105KBN, C821 0.1

R827 18K, R828 1K, R829 12K, C801 0.1, R830 3900, R802 1200, R803 1K, R801 1K, C805 1, R843 0, C806 0.1, R804 0, C807 0.1, R805 0, C811 0.1, C808 0.33

IC801
LV4135W
(LCD DRIVE)

48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	
SIGSENT	VCC2	FBR	ROUT	FBG	GOUT	GND2	FBB	BOUT	VCCPCD	PCD	GNDPCD	EBPCD	CSHO	CSVO	TEST	
6.4	11.8	1.5	6.6	1.4	6.7		1.4	6.6	11.8	6.6		1.4	-	-	-	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16					
CLPIN	HDIN	VDIN	NC	RPD	VSS1	CKI	CKO	VDD1	LOAD	DATA	SCLK	RESET	VDD2	CSHI	CSVI					
1.7	2.2	2.3	-	2.3		1.6	1.5	3.0	2.8	2.9	2.9	0	3.0	-	-					

49	3.0	VCC1
50	6.1	COMOUT
51	2.1	COMIN
52	-	NC
53	0.1	EXTR
54	0.1	EXTG
55	0.1	EXTB
56	2.0	VREG
57	-	NC
58	1.7	RIN
59	1.7	GIN
60	1.7	BIN
61	-	VSEPTC
62	-	SYNCIN
63	3.0	START UP
64		GND1

32		VSS2
31	-	VD
30	2.7	ENB
29	0.4	XENB
28	1.5	CKV1
27	1.5	CKV2
26	0.1	STV
25	3.0	XSTV
24	-	HD
23	1.4	BLHD
22	0.3	PCG1
21	2.8	PCG2
20	1.5	CKH1
19	1.5	CKH2
18	0.1	STH
17	3.0	XSTH

R824 0, R825 0

TO EVF LCD PANEL FP803

1	COM	
2	CK V1	
3	CK V2	
4	V VDD	
5	STV	
6	X STV	
7	CSV	
8	ENB	
9	X ENB	
10	PCD	
11	B	
12	R	
13	G	
14	VSS	
15	X PCG	
16	PCG	
17	CSH	
18	X STH	
19	STH	
20	CK H2	
21	CK H1	
22	H VDD	

R837 10K, R838 0, R840 0, R839 0

R808 0, R809 0, R810 0, D802 MA2S728, D803 MA2S728, R812 10K, R813 10K, C834 0.1, C812 6V10, C813 0.01

R818 10K, R314 1K, R817 33K, C831 1000P, R816 0, L805 10u, C830 6.3V3.3, C830 6800P, C833 18P, R819 100K, R815 10K, C825 0.1, R820 390K, C828 0.01, D801 MA338

T881 ETJ11K91AM, C881 10, L806 10u, JA1, JA2, JA3, BL820 VLL0218, BACK LIGHT UNIT, Q881 2SK2055 (BACK LIGHT DRIVE), E.V.F.(B)C.B.A.(VEP28277A)

R841 100, R881 47K, IC802 TC7SET08FU

NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NOTE:
THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.(EVF:ON)

G F E D C B A

1 2 3 4 5 6 7 8 9 10 11

MECHA. UNIT

- LOADING MOTOR
- POSITION SW
- S/T-REEL
- S/T-PHOTO
- S-TAB SW
- SENS LED
- TAPE DATA

CAMERA LENS UNIT

CCD FLEX. CARD C.B.A.

PS291	
H2	1
H1	2
R	3
PW	4
PW	5
PW	6
OUT	7
12V	8
V1	9
V2	10
V3	11
V4	12
SUB	13
-6.5V	14

MIC UNIT

ECM

DIGITAL STILL OUT

AV OUT

MIC IN

FP4903	
D GND	1
IR OUT	2
PWR RST	3
D OUT	4
R IN	5
REMOTE CTL	6
TALLY	7
5V	8
IR LED OUT	9
NOREG	10
AV GND	11
AV GND	12
V/HP(R)	13
L/HP(L)	14
R	15
PLUG IN (L)	16
ZOOM	17
MIC GND	18
MIC GND	19
MIC GND	20
MIC(L)	21
WIND SW	22
MIC(R)	23
MIC 5V	24
MIC 5V	25
EXT MIC (L)	26

FRONT JACK

EDIT

S OUT

DV OUT

VTR MAIN C.B.A.

FP2203	
1	S TAB
2	D GND
3	D GND
4	NOREG GND
5	SNS LED
6	MIC CLK
7	VH(-)
8	T REEL(-)
9	T REEL(+)
10	VH(+)
11	MIC DT
12	MIC VDD
13	S REEL(-)
14	S REEL(+)
15	V OUT 3V
16	S PHOTO
17	V OUT 3V
18	T PHOTO

FP2204	
1	D GND
2	POS3
3	POS2
4	POS1
5	M UNLOAD
6	M UNLOAD
7	M LOAD
8	M LOAD

PP201	
1	∮H2
2	∮H1
3	∮R
4	PW
5	PW
6	PW
7	OUT
8	12V
9	∮V1
10	∮V2
11	∮V3
12	∮V4
13	SUB
14	-6.5V

FP701	
1	ALC CNT(+)
2	ALC MAIN(+)
3	HALL OUT(+)
4	HALL IN(-)
5	HALL OUT(-)
6	HALL IN(+)
7	ALC CNT(-)
8	———
9	FM T3
10	FM T2
11	FM T1
12	FM T4
13	0 LUX SW
14	ZM T3
15	ZM T2
16	ZM T1
17	ZM T4
18	F.ENC
19	F ENC VCC
20	Z.ENC
21	LED CONT

FP4801	
1	EXT MIC (L)
2	MIC 5V
3	MIC 5V
4	MIC(R)
5	WIND SW
6	MIC(L)
7	MIC GND
8	MIC GND
9	MIC GND
10	ZOOM
11	PLUG IN (L)
12	R
13	L/HP(L)
14	V/HP(R)
15	AV GND
16	AV GND
17	NOREG
18	IR LED OUT
19	5V
20	TALLY
21	REMOTE CTL
22	R IN
23	T OUT
24	PWR RST
25	IR OUT
26	D GND
27	CR POWER
28	SERIAL DATA
29	SERIAL CLK
30	E5V
31	S PLUG (L)
32	S Y
33	S C
34	D GND
35	TPB(-)
36	TPB(+)
37	TPA(-)
38	TPA(+)
39	D GND

FP2202	
FG(+)	1
COM	2
M2A	3
M2A	4
M1A	5
M1A	6
M3A	7
M3A	8
D GND	9
PG(+)	10

CYLINDER

FP5001	
GND	1
CH2F	2
CH2S	3
CH1S	4
CH1F	5
GND	6
GND	7
GND	8

FP2201	
M1	1
M1	2
M3(-)	3
VH(+)	4
H3(+)	5
H1(-)	6
H2(-)	7
H1(+)	8
M2	9
M2	10
VH(-)	11
H2(+)	12
M3	13
M3	14
VMR	15
AFG1	16
D GND	17
AFG2	18

CAPSTAN

FP6302	
D GND	1
CAM MNL	2
CAM MOD	3
MENU	4
AF MF	5
SCAN3	6
———	7
REW/SER(-)	8
FF/SER(+)	9
STOP/FADE	10
PAUSE/WB	11
PLAY/BACKLIGHT	12
SCAN4	13
ENC SW	14
D GND	15
ENC(-)	16
ENC(+)	17

SIDE CASE R UNIT

AUTO MNL

SELECT

MENU

FOCUS

PP3001			
MON E R OUT	1	60	CAM RESET
MON E G OUT	2	59	E2 INJ SBI
MON E B OUT	3	58	CAM TEST
MON E PLL	4	57	E2 INJ SBT
FRP	5	56	F VCC
MON M FRP	6	55	CAM VD
MON M R OUT	7	54	EVR SBO
MON M B OUT	8	53	EVR SBI
MON M G OUT	9	52	EVR SBT
HID1	10	51	CN (H)
ENVELOPE	11	50	———
RF GND	12	49	AFST
———	13	48	UART1
SPA	14	47	UATR0
ATF1	15	46	PWR RST
———	16	45	TEST0
D GND	17	44	BST TEST
MON E FRP	18	43	TCK
IRIS OPEN	19	42	TMS
M MODE0	20	41	TDO
M MODE1	21	40	TDI
EX MOD1	22	39	MIC CK
FNO	23	38	MIC DT
V REF (H)	24	37	MON M PLL
CAM A GND	25	36	MON M V COM
V OUT	26	35	P ON (L)
CAM 5V	27	34	———
———	28	33	———
V REF (L)	29	32	———
AD IN	30	31	———

EVR

Ⓐ Ⓑ Ⓒ

G F E D C B A

1 2 3 4 5 6 7 8 9 10 11

Service Manual

ORDER NO. VMD0109026C8

Service Manual

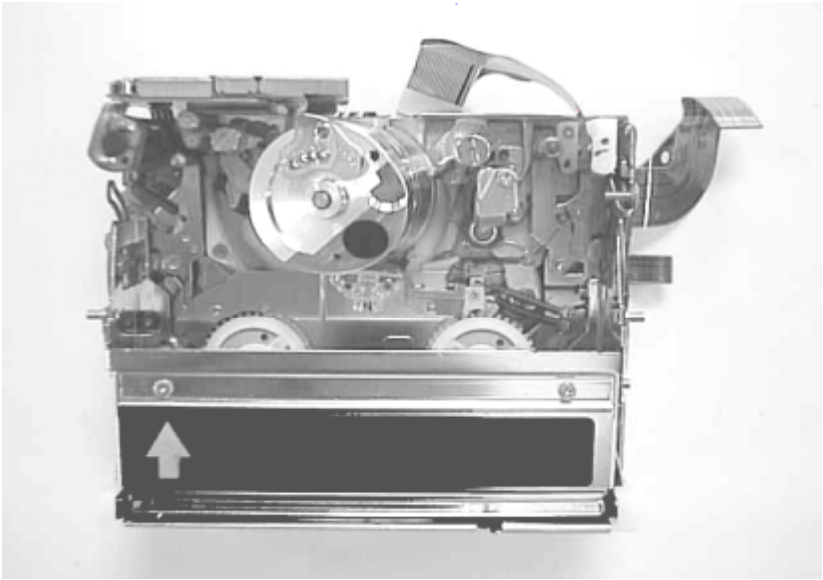
Digital Video Camera/Recorder

Panasonic Mini DV

- Q-MECHANISM

(Including Q1, Q2&Q3)

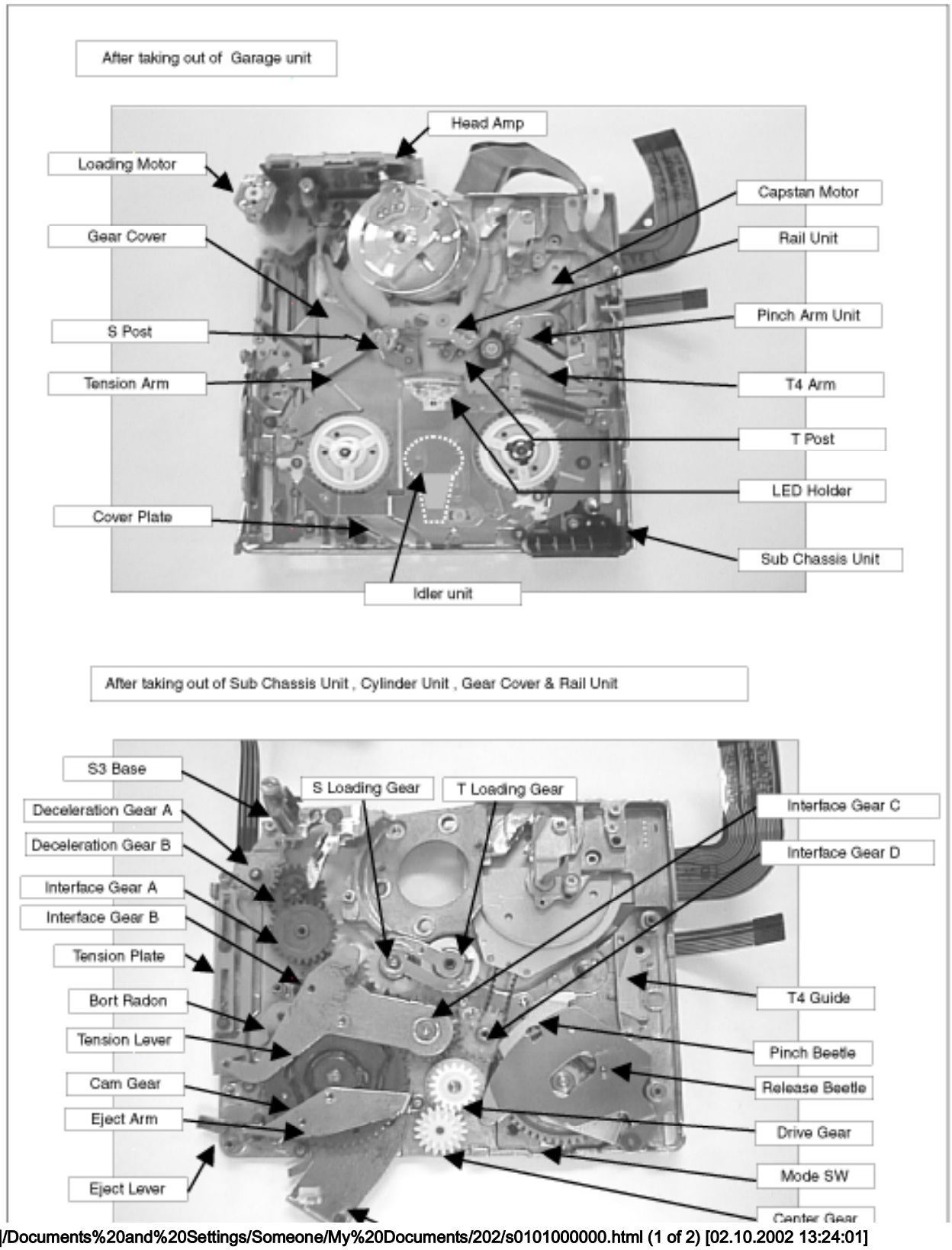
Disassembly/Assembly Procedures
Adjustment Procedures



Panasonic

1.1 UPPER SIDE

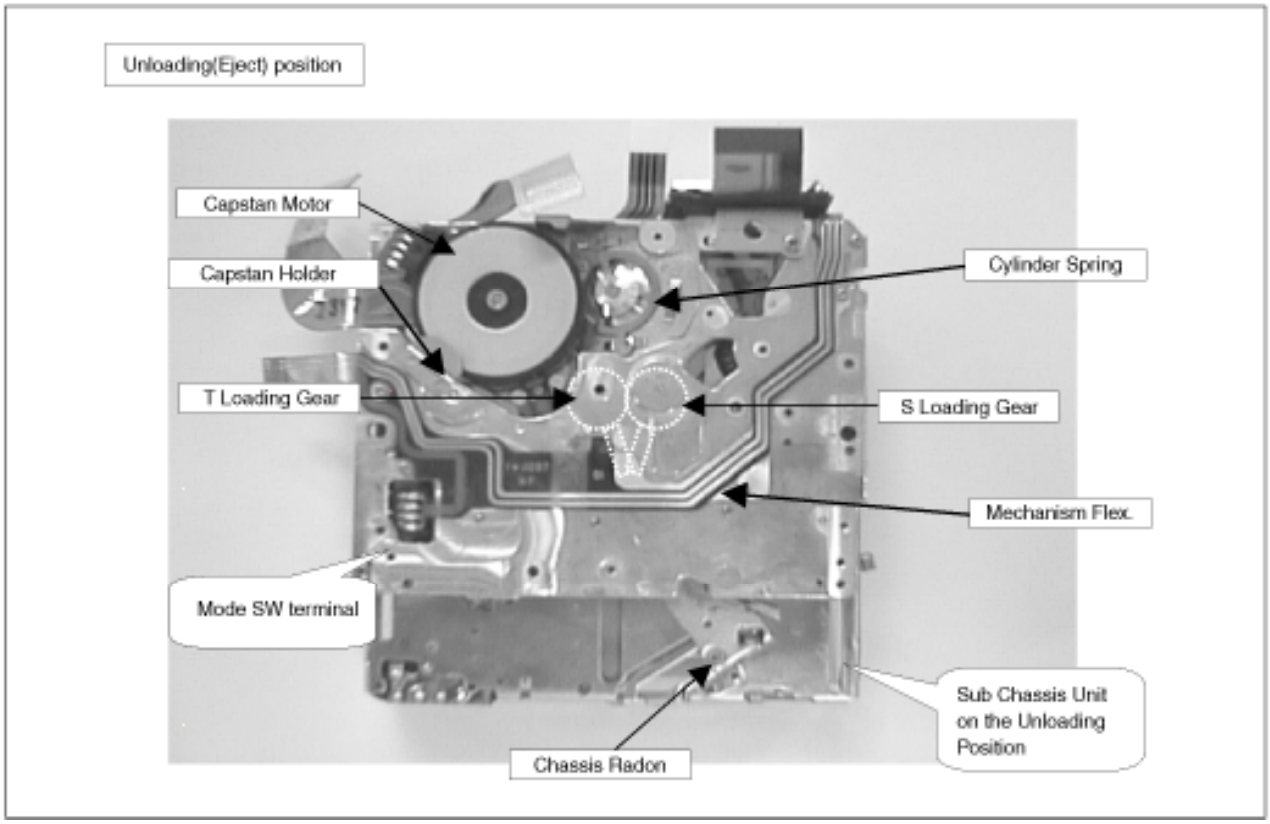
TOP PREVIOUS NEXT



TOP PREVIOUS NEXT

1.2 BOTTOM SIDE

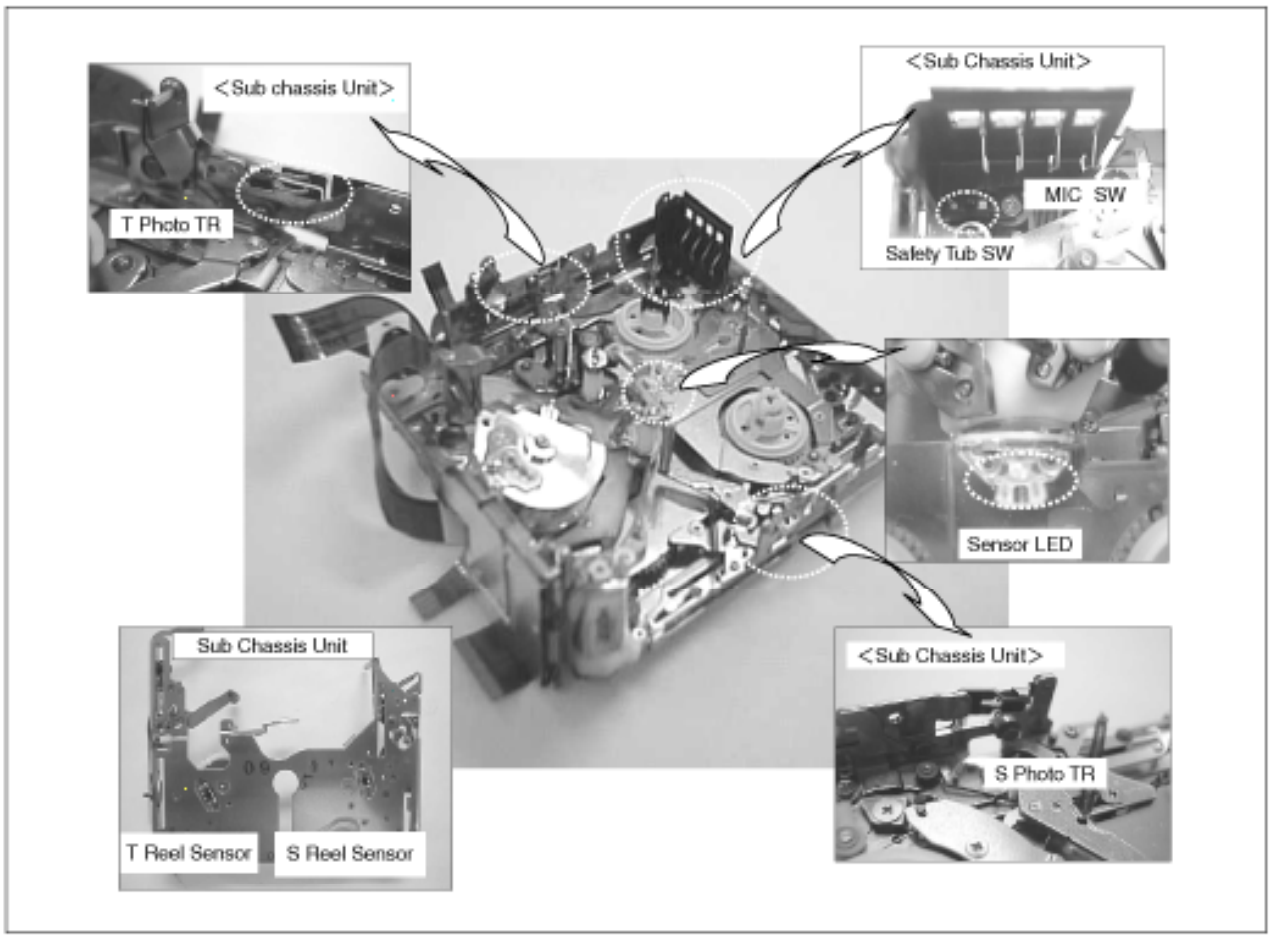
TOP PREVIOUS NEXT



TOP PREVIOUS NEXT

1.3 SENSOR POSITION

TOP PREVIOUS NEXT

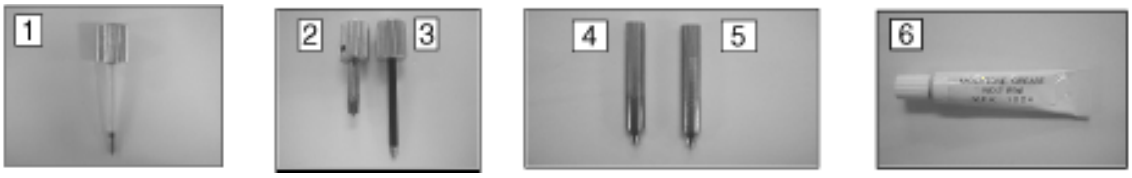


TOP PREVIOUS NEXT

2.1 FIXTURES& TOOLS FOR DISASSEMBLY& ASSEMBLY

TOP PREVIOUS NEXT

No.	Parts number	Parts Name	Q´ty	New	Remarks
1	VFK1390	Precision Driver	1	•	
2	VFK1444	Gear Driver	1	•	
3	VFK1444Q2	Gear Driver for Q2 & Q3mecha.	1	•	
4	VFK1650	Cut Washer Jig(0.86)	1	•	
5	VFK1649	Cut Washer Jig(0.65)	1	•	
6	VFK1024	Molytone Grease	1	•	

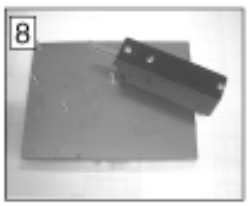


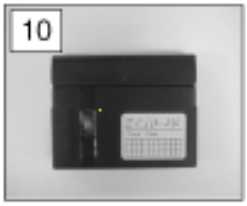
TOP PREVIOUS NEXT

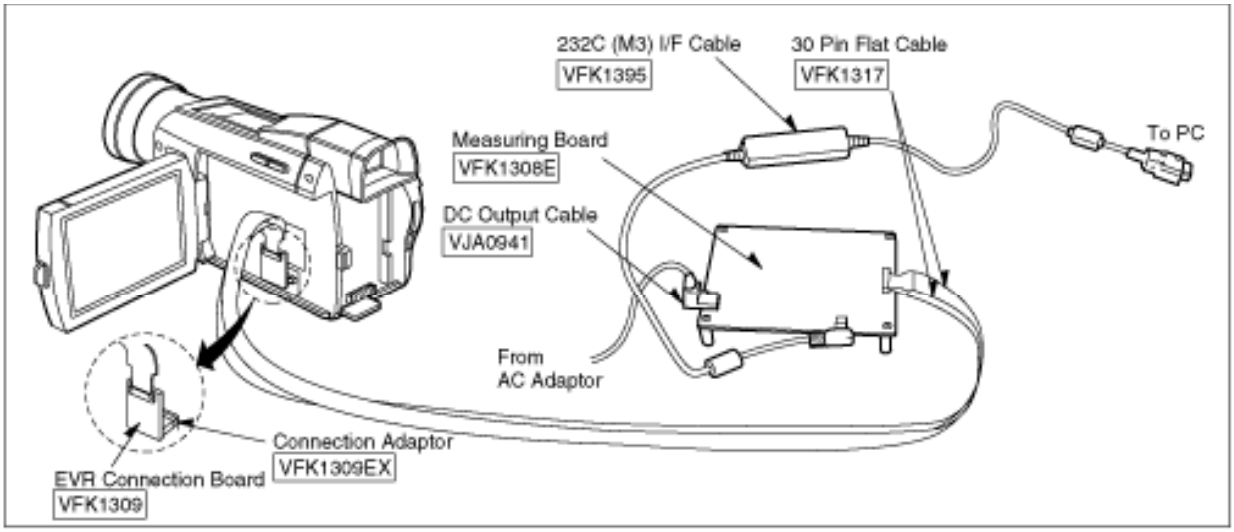
2.2 FIXTURES&TOOLS FOR MECHANICAL ADJUSTMENT

TOP PREVIOUS NEXT

No.	Parts number	Parts Name	Q´ty	New	Remarks
7	VFK1278	Post Adjustment Driver	1	•	
8	VFK1638	Capstan Tilt Adj. Jig	1	•	
9	VFK1641	Envelope Detecor Board	1	•	
10	VFM3110EDS(PAL)	DV Alignment Tape	1	--	or VFM3010EDS(NTSC)
11	VFK1395	232C(M3) I/F Cable	1	--	"TATSUJIN" system
12	VFK1308E	Measuring Board	1	--	"TATSUJIN" system
13	VFK1309	EVR Connecor Board	1	--	"TATSUJIN" system
14	VFK1309EX	Connection Adaptor		--	"TATSUJIN" system
15	VFK1317	30pin Flat Cable	2	--	or VFK1517(New - 300mm) "TATSUJIN" system
16	VJA0941	DC Output Cable	1	--	"TATSUJIN" system







2.3 MAINTENANCE FOR CAPSTAN TILT ADJUSTMENT JIG.

TOP PREVIOUS NEXT

1. Keep applying oil for preventive oxidation on base block.

   Glove should be used when you apply oil.

2. Do not apply pressure to this jig.

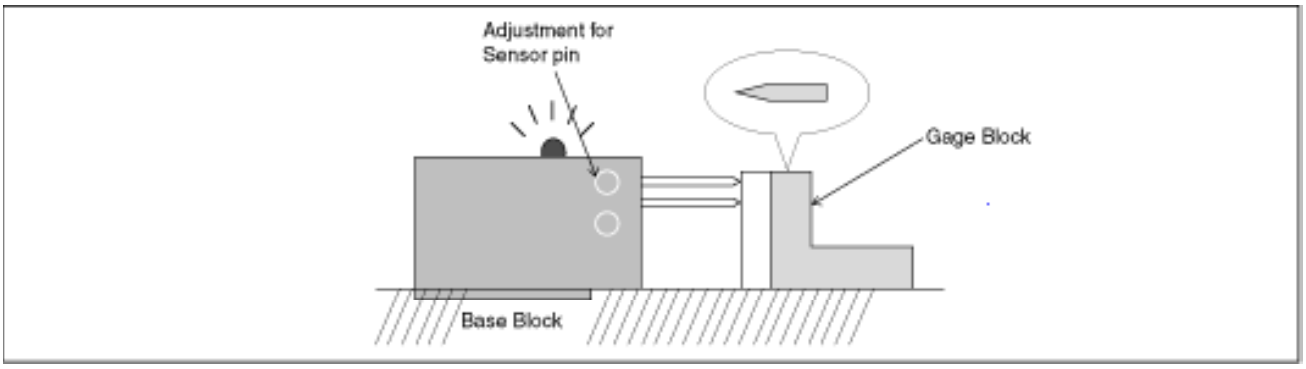
3. If Brightness of LED become weak, Battery (SUM4 X 2) in the top of box should be changed.

4. Inspect sensor pin regularly as following.

   A. Put Gage Block to sensor pin.

   B. Confirm LED is lit.

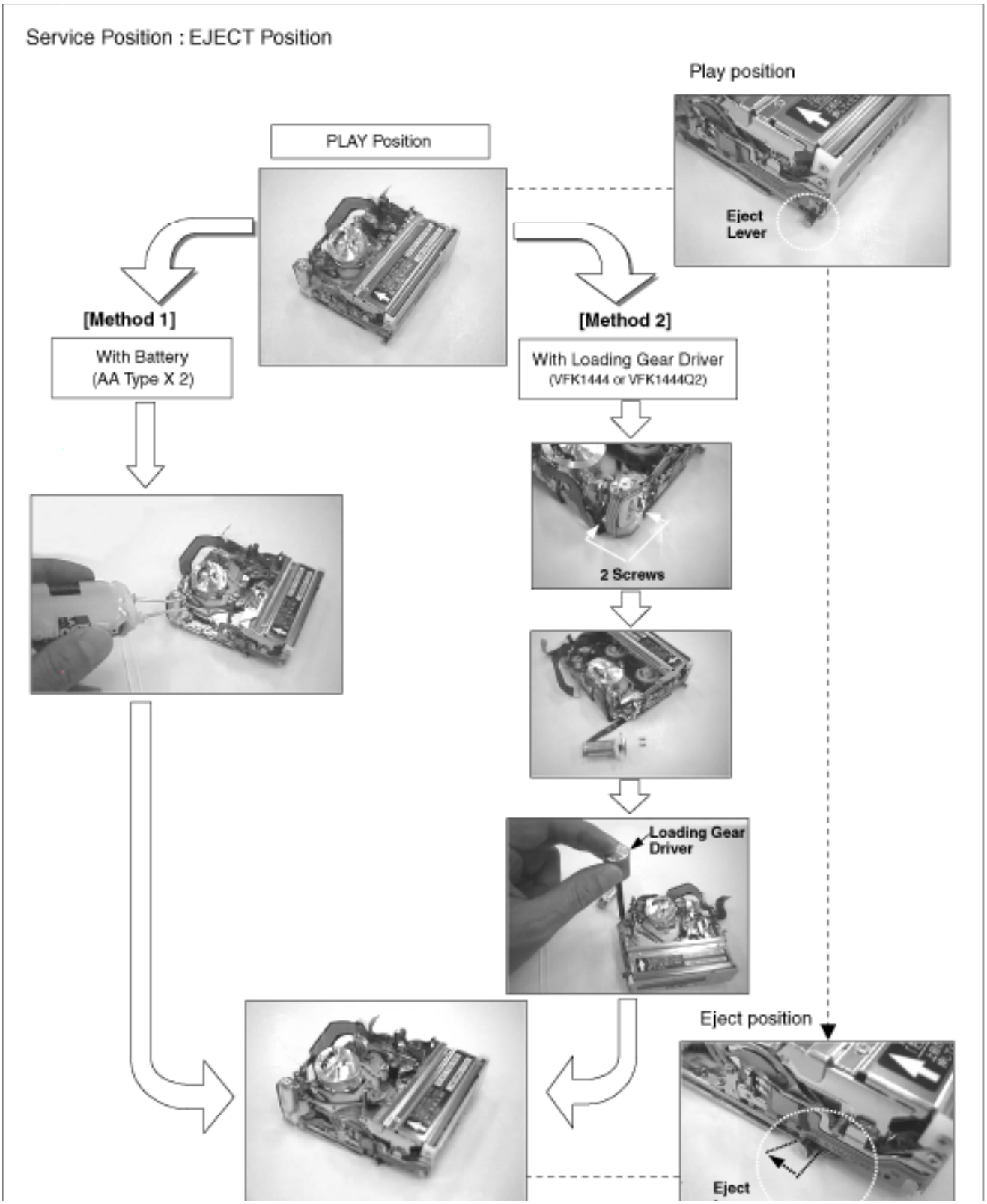
      If not, adjust sensor pin by rotating a screw.

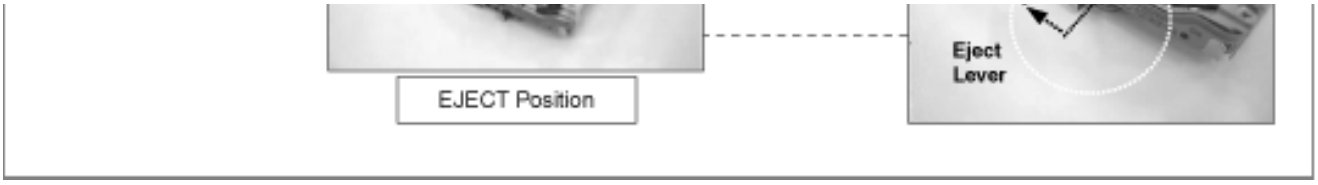


TOP PREVIOUS NEXT

3.1 PREPARATION FOR DISASSEMBLY

TOP PREVIOUS NEXT





TOP PREVIOUS NEXT

3.2 DISASSEMBLY PROCEDURE

TOP PREVIOUS NEXT

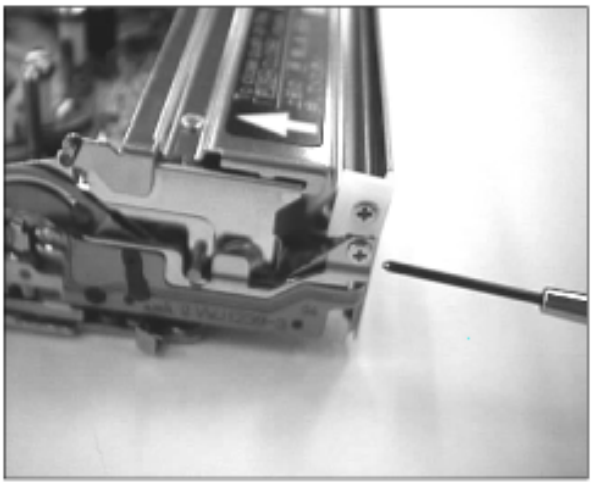
No.	Item	Fig.	Procedure
1	Cassette Up Unit.	Fig. D1-1	1) Remove 3 screws. (Q1 &2 have 4 screws)
		Fig. D1-2	2) Take coupling portion off from both S &T sides.
*2	H Amp Unit./(Only Q1 & Q2)	Fig. D2-1	1) Remove a screw from Shield case.
		Fig. D2-2	2) Take Cylinder Flex. From connector.
		Fig. D2-3	3) Remove a screw from H Amp Angle.
3	Cylinder Unit & RT Flex. Flame.	Fig. D3-1	1) Remove a screw from RT Flex. Flame.
		Fig. D3-2	2) Remove 3 screws and then take Cylinder Spring out.
		Fig. D3-3	3) Remove a screw and take RT Flex. Flame out.
4	LED Holder, Cover plate & Idler U.	Fig. D4-1	1) Pull up and remove LED Holder.
		Fig. D4-2	2) Move LED Flat Cable out of position and unhook 2 springs.
		Fig. D4-3	3) Remove 5 screws and remove Cover Plate & Idler U.
5	Sub Chassis Unit	Fig. D5-1	1) Remove 4 screws.
		Fig. D5-2	2) Remove a screw and unhook a spring from Pinch Arm.
6	Pinch Arm & Center Gear	Fig. D6-1	1) Remove Cut Washer and take Pinch Arm out. 2) Take Center Gear out.
		Fig. D6-2	3) Take Center Gear Spacer out.
7	Rail Unit	Fig. D7-1	1) Make half loading until / Connection Arm comes out.
		Fig. D7-2	2) Disconnect Connection Arms. a) Hold Loading Gear side. b) Disconnect connection arms.
		Fig. D7-3	3) Remove 4 screws.
8	T-Loading Gear & S-Loading Gear	Fig. D8	1) Take T-Loading Gear out. 2) Remove Cut Washer on S-Loading Gear and take S-Loading Gear out. * Removed Cut Washer can not be used again.
9	Gear Cover	Fig. D9	1) Remove a screw and slide Gear Cover to take out.
10	Pinch Beetle & Release Beetle	Fig. D10	1) Remove a washer and take Pinch Beetle and Release Beetle out together.
11	Tension Lever & Eject Arm.	Fig. D11	1) Remove a screw and take Tension Lever out. 2) Remove a washer and take Eject Arm out.
12	Interface Gears	Fig. D12	1) Remove 4 Gears.
13	Cam Gear	Fig. D13	1) Remove Cam Gear.

14	Chassis Radon	Fig. D14	1) Remove a washer.
15	Boat Radon	Fig. D15	1) Remove Boat radon.
16	Drive Gear	Fig. D16	1) Remove Drive Gear and a White Waher underneath.
17	Capstan Holder & Capstan Motor	Fig. D17-1	1) Remove 2 screws and take Capstan Holder out. * It is not necessary to remove 2 screws for New Capstan Holder. Because it shapes screw.
		Fig. D17-2	2) Remove 3 screws and take Capstan Motor out downword.
18	Loading Motor unit & Mechanism Interface Flex.	Fig. D18-1	1) Remove 2 screws and take Loading Motor Unit out.
		Fig. D18-2	2) Remove 4 screws and dissolder at Mode Sw.
*19	Mode Switch , Deceleration Gears & Tension Plate.	Fig. D19	1) Take Mode Sw out. 2) Remove a washer and take Deceleration Gear (A) out. 3) Take Deceleration Gear (B) out. 4) Remove 2 washers and take Tension Plate.
*20	T4 Guide , Eject Lever , Pulley Cover & Pulley.	Fig. D20-1	1) Remove a screw and take T4 Guide out.
		Fig. D20-2	2) Remove a washer and take Eject Lever out.
		Fig. D20-3	3) Remove 2 screw and take Pulley Cover out. 4) Take Pulley out.
*21	S3 Base U.	Fig. D21	1) Remove a screw for S3 adjustment and take S3 Base U.

* 1) Procedure 2 for H.Amp Unit is applied only Q1 & Q2 / mechanism. 2) Procedure 19 - 21 can be changed in order.

Fig. D1-1

1/3 (Left)
* Lower one



2/3 (Front)
* Q1 & Q2 : 2screws

3/3 (Right)
* Lower one

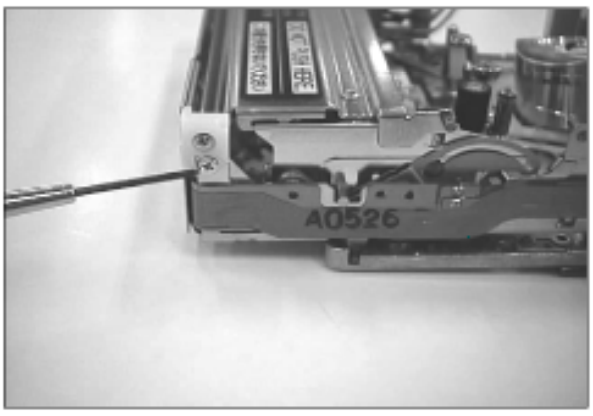


Fig. D1-2

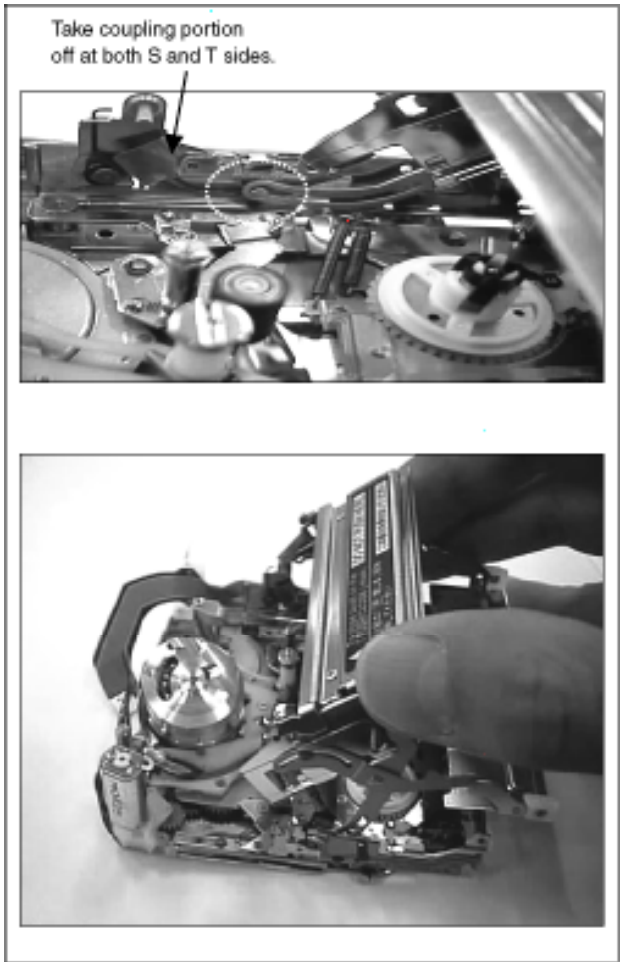


Fig. D2-1

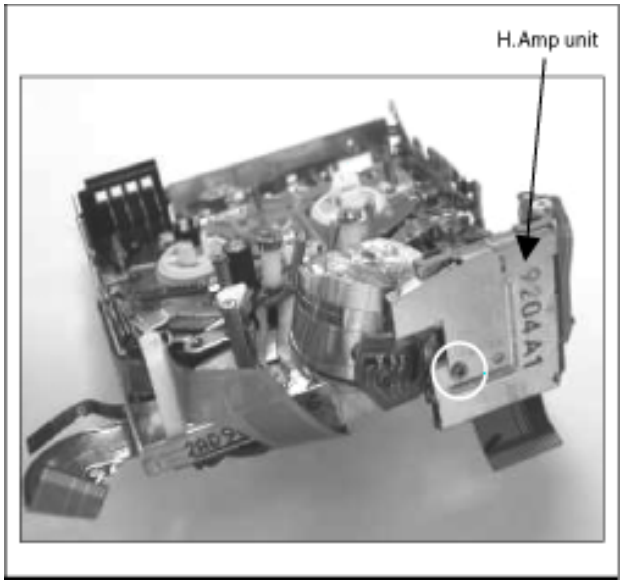


Fig. D2-2

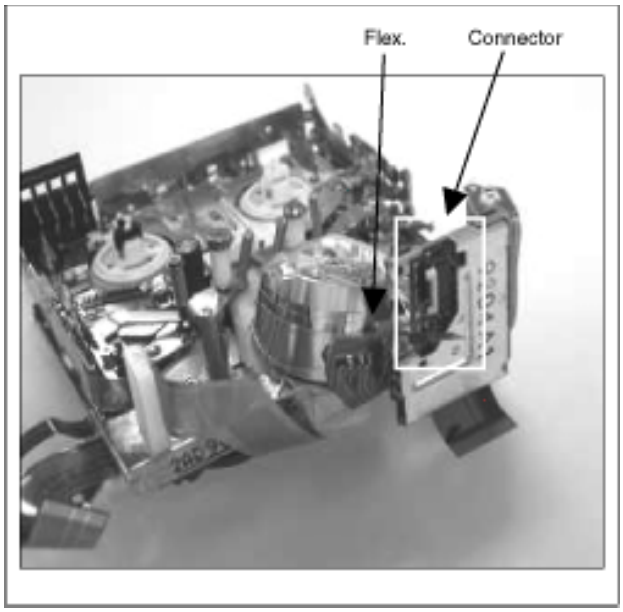


Fig. D2-3

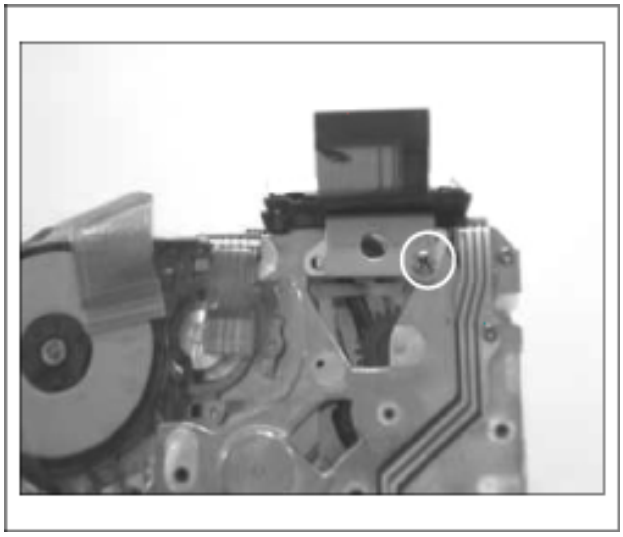


Fig. D3-1

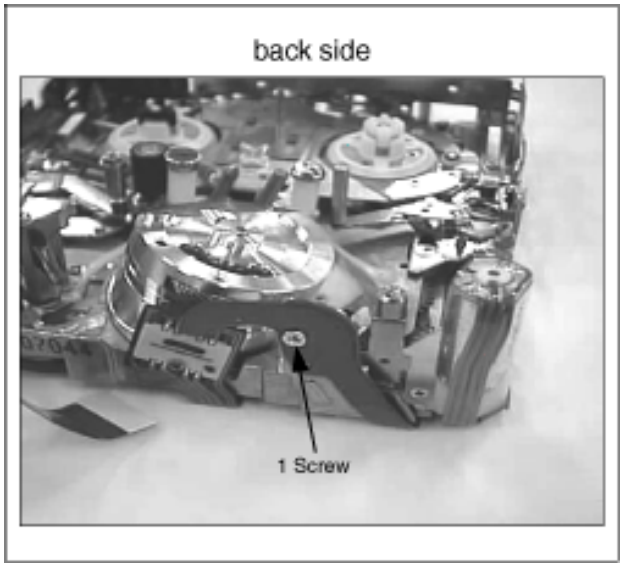
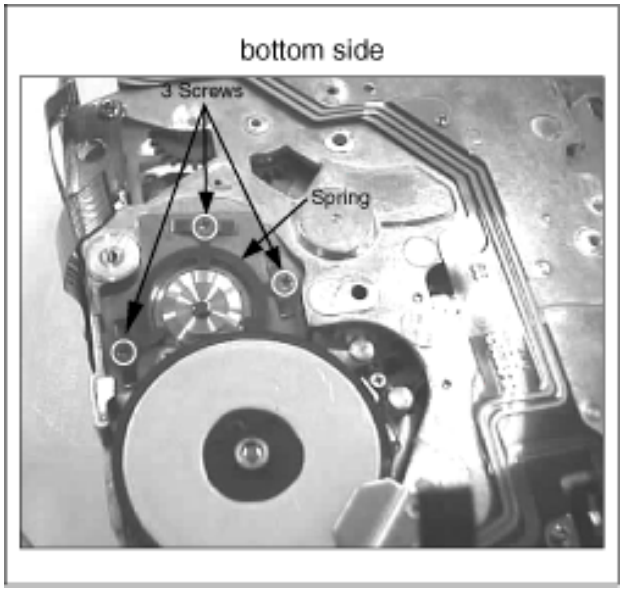


Fig. D3-2



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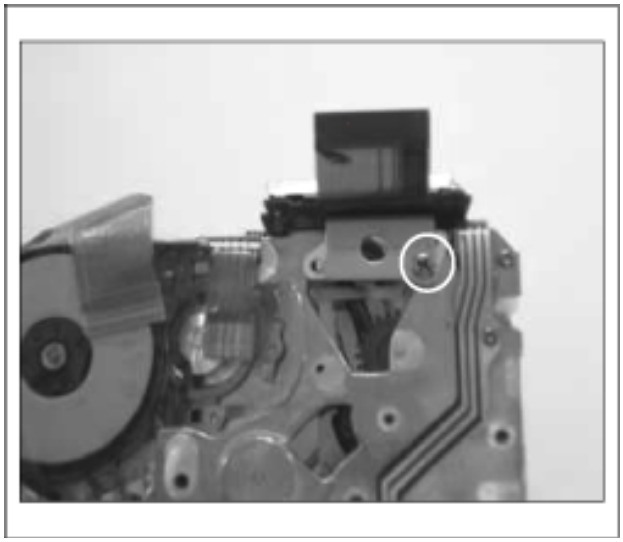
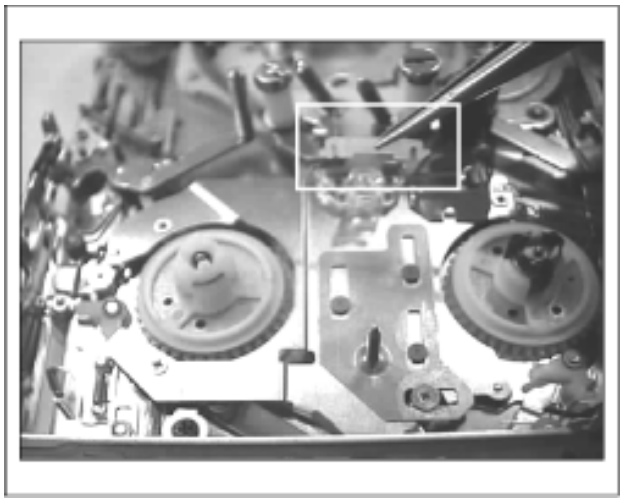


Fig. D4-1



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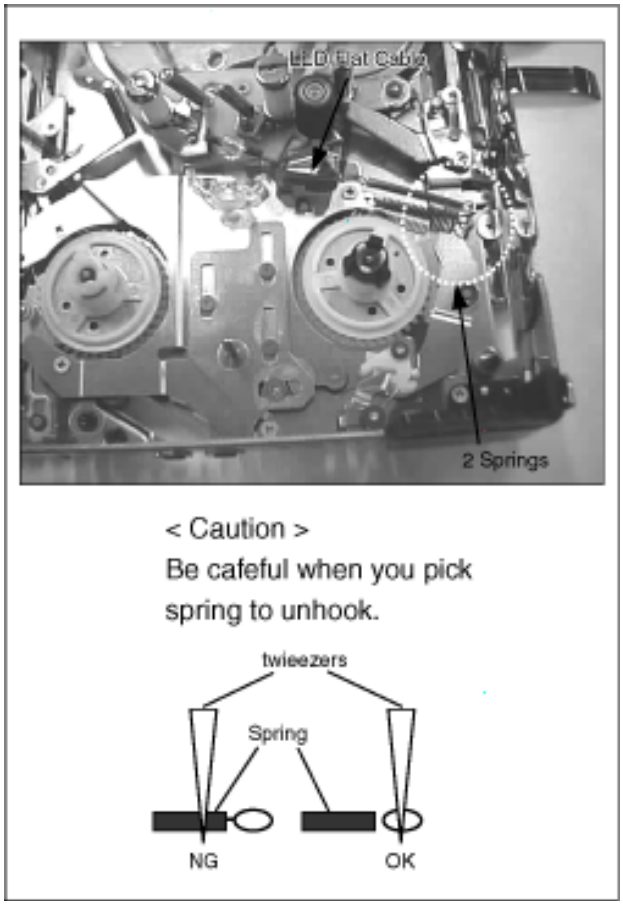

LED Flat Cable
2 Springs
< Caution >
Be cafeful when you pick
spring to unhook.
twieezers
Spring
NG
OK

Fig. D4-3

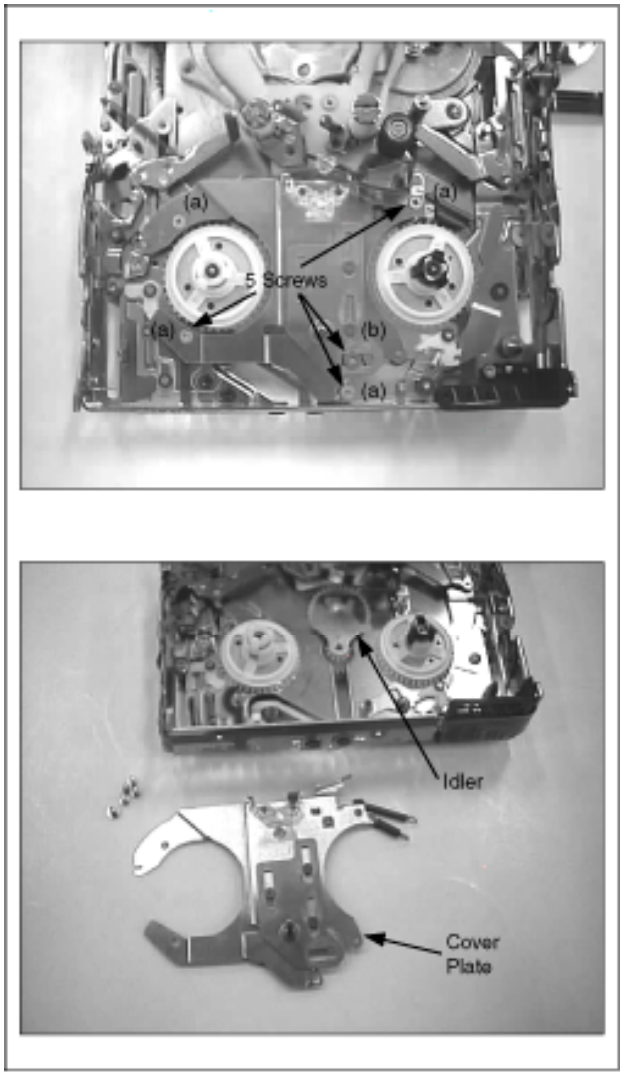
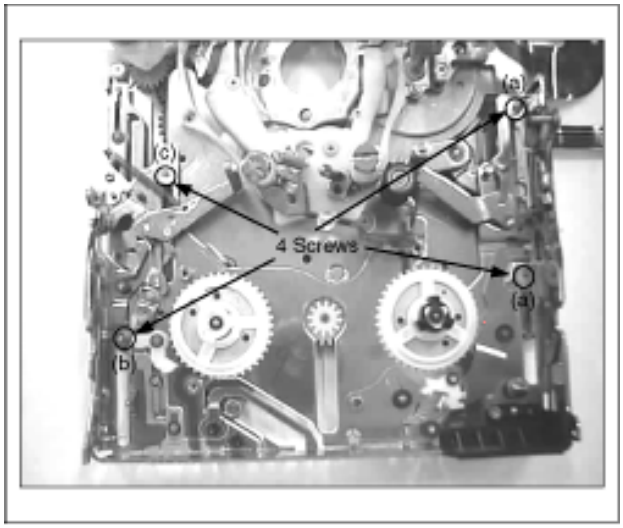


Fig. D5-1



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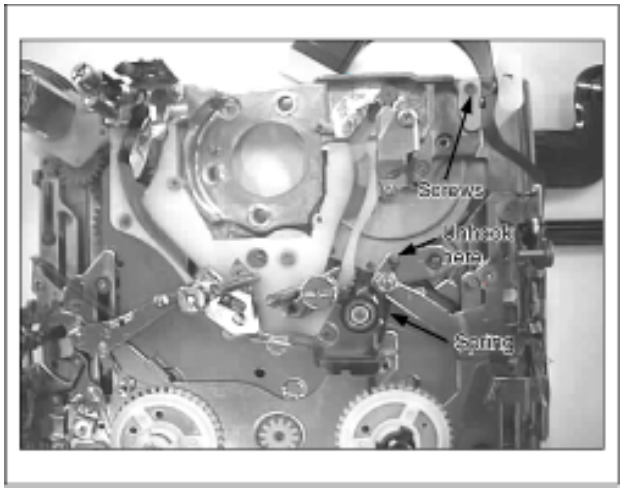


Fig. D6-1

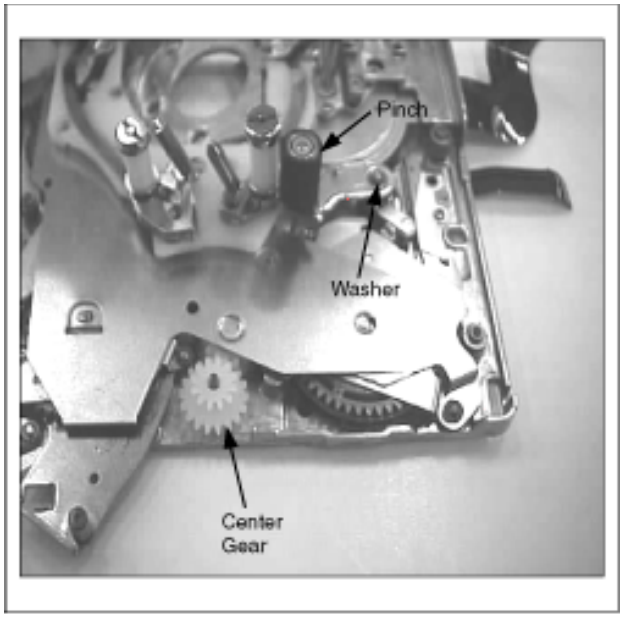


Fig. D6-2

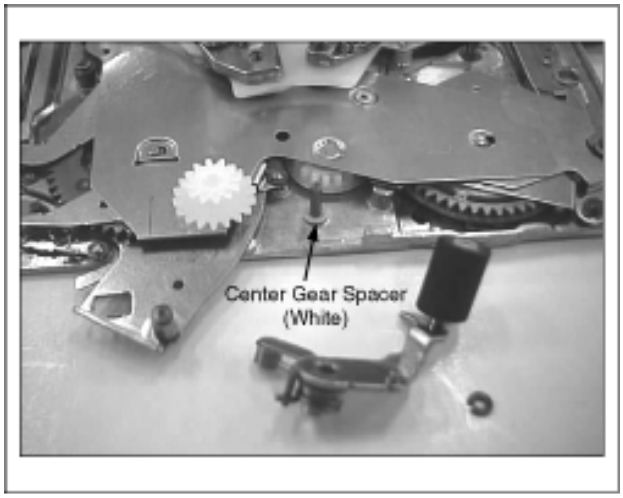


Fig. D7-1

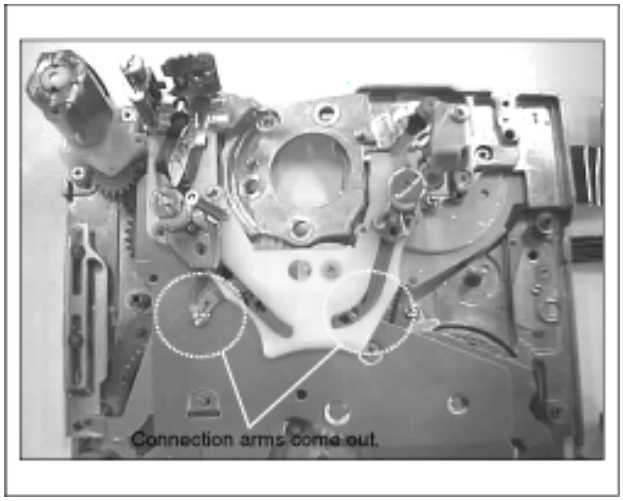


Fig. D7-2

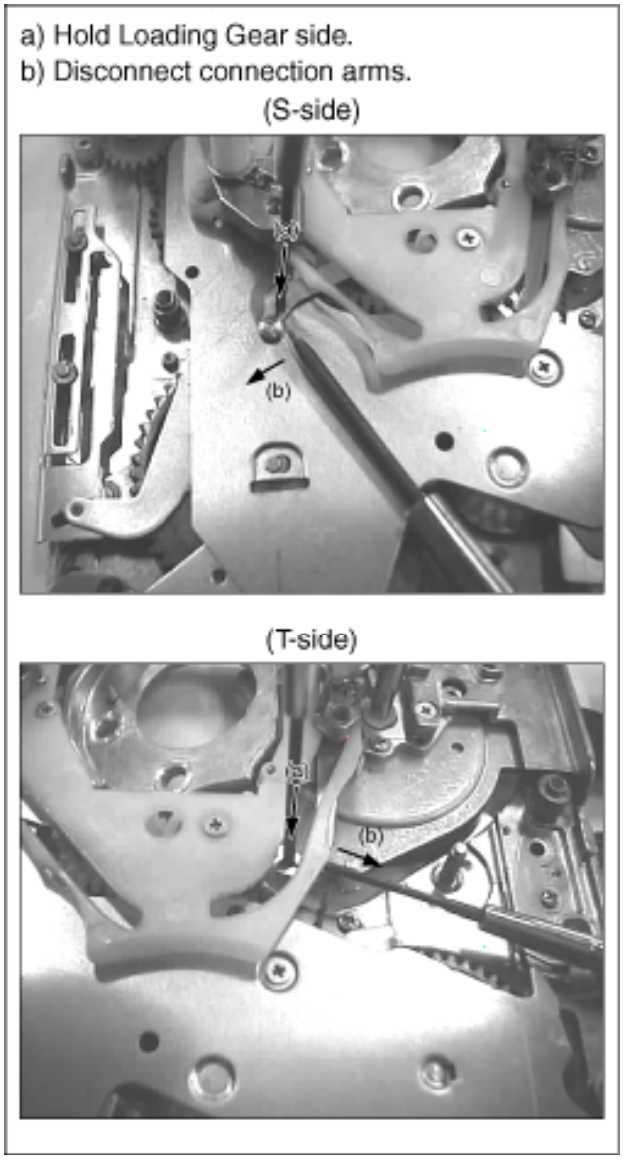

a) Hold Loading Gear side.
b) Disconnect connection arms.
(S-side)
(a)
(b)
(T-side)
(a)
(b)

Fig. D7-3

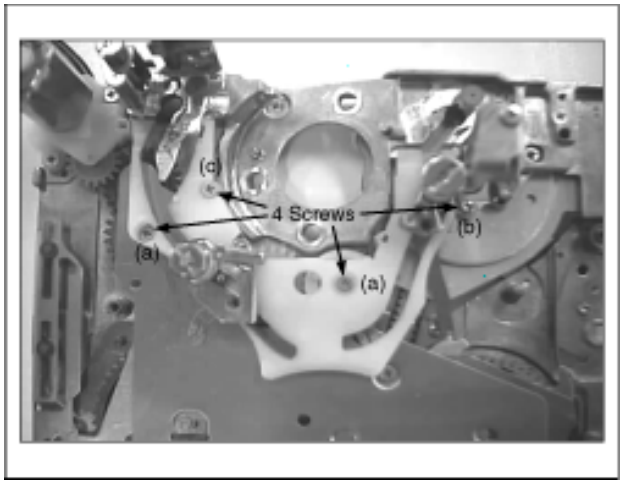

(c)
4 Screws
(b)
(a)
(a)

Fig. D8

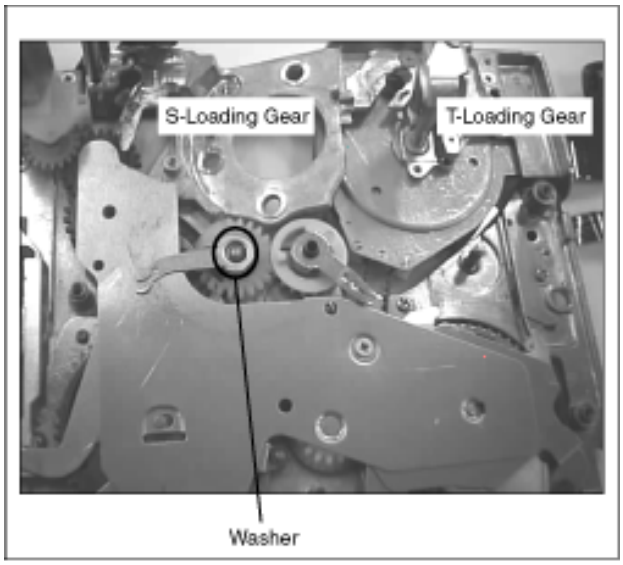


Fig. D9

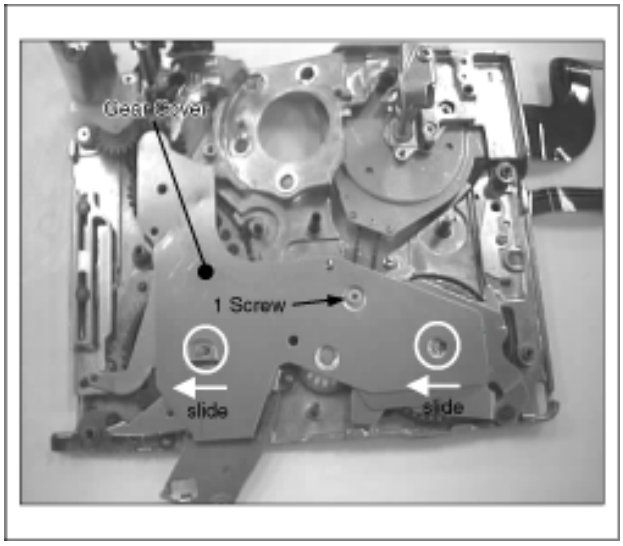


Fig. D10

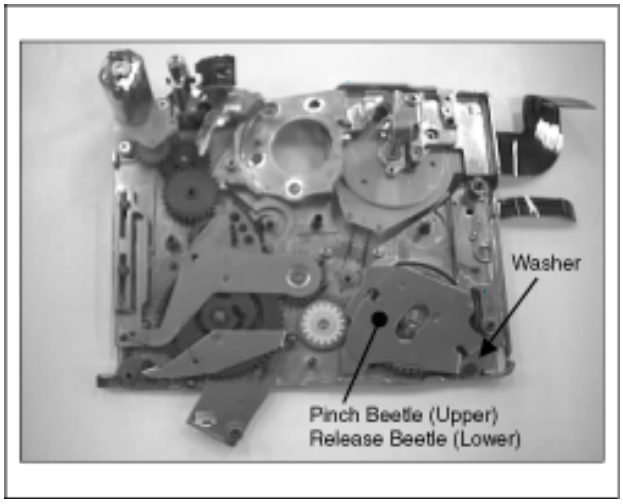


Fig. D11

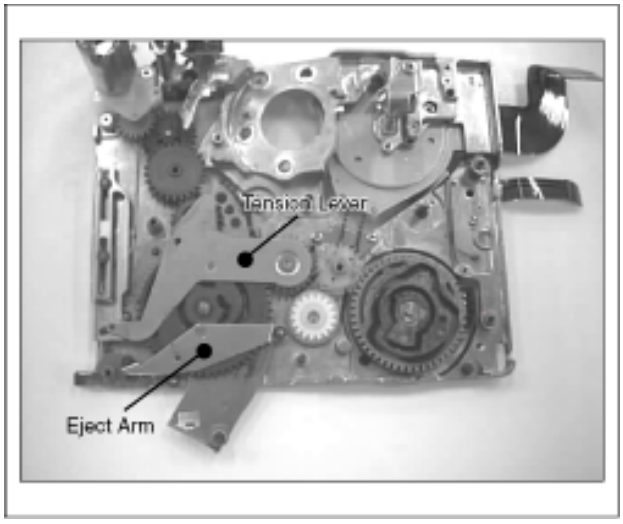


Fig. D12

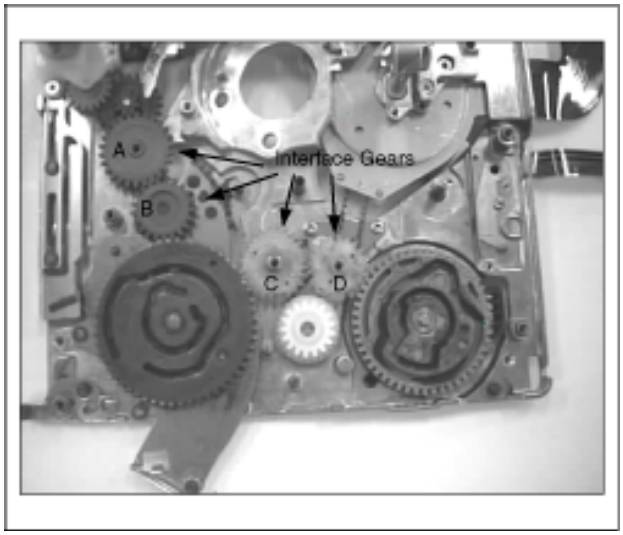


Fig. D13

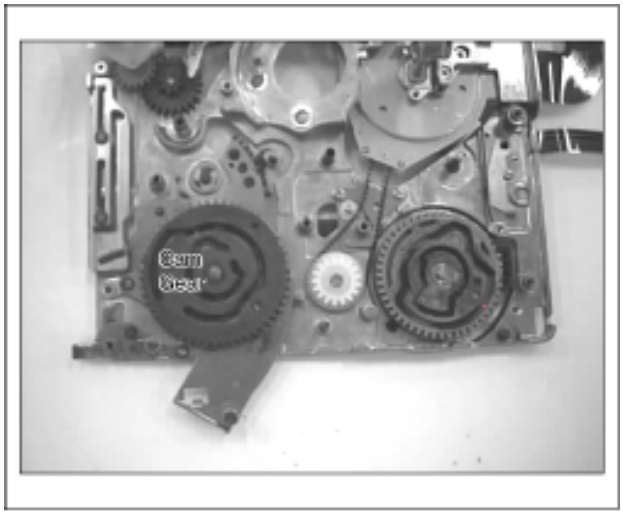
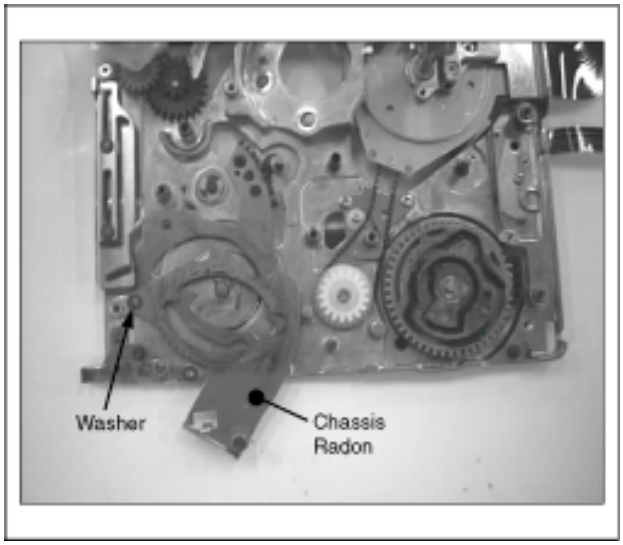


Fig. D14



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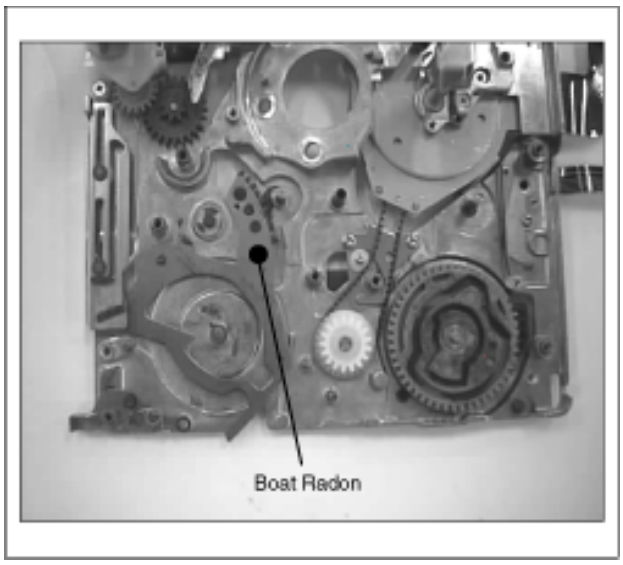


Fig. D16

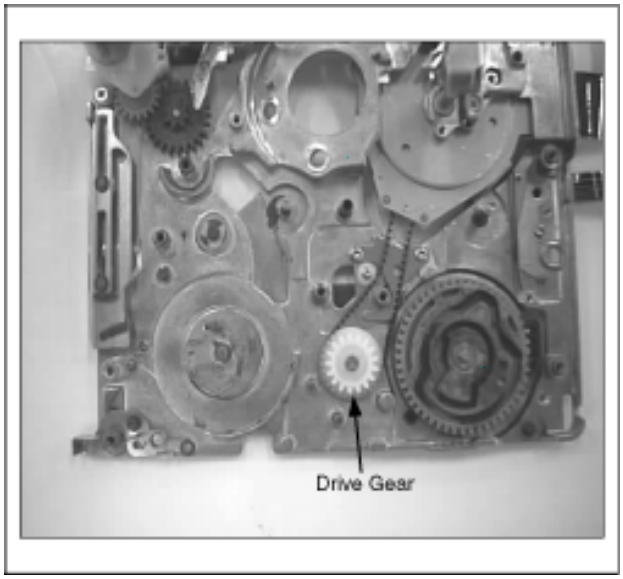


Fig. D17-1

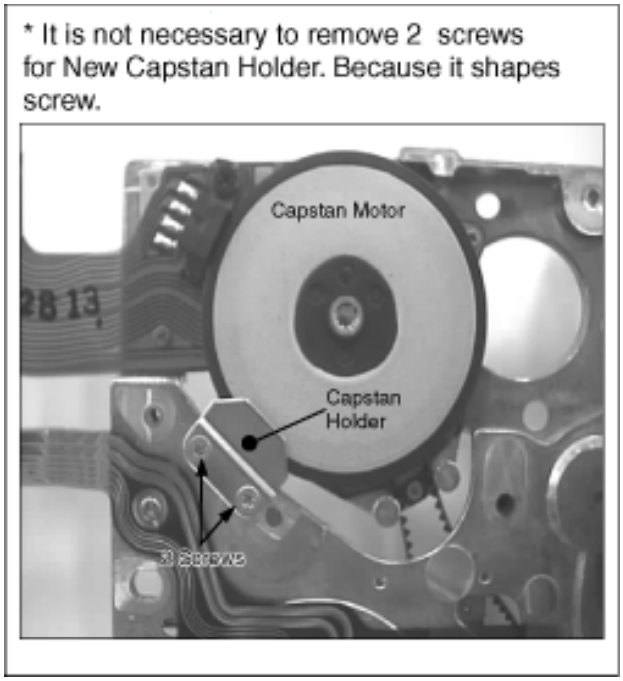


Fig. D17-2

Fig. D18-1

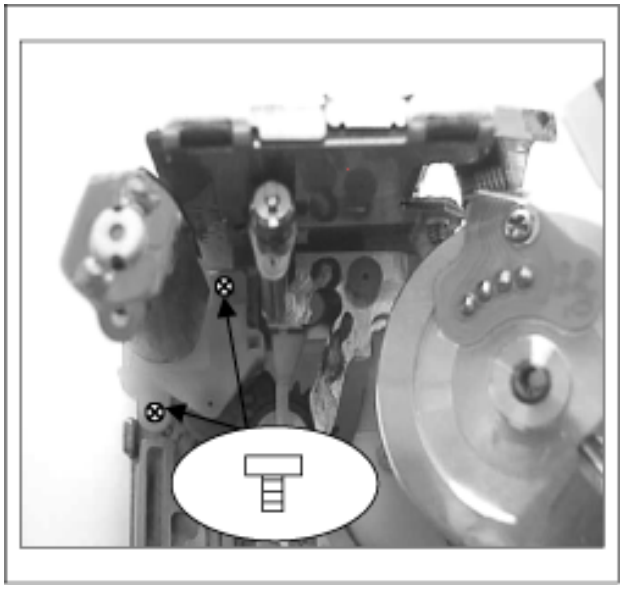


Fig. D18-2

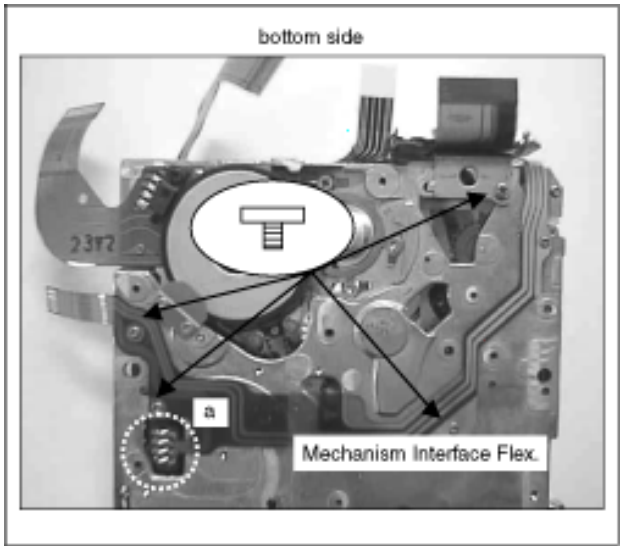
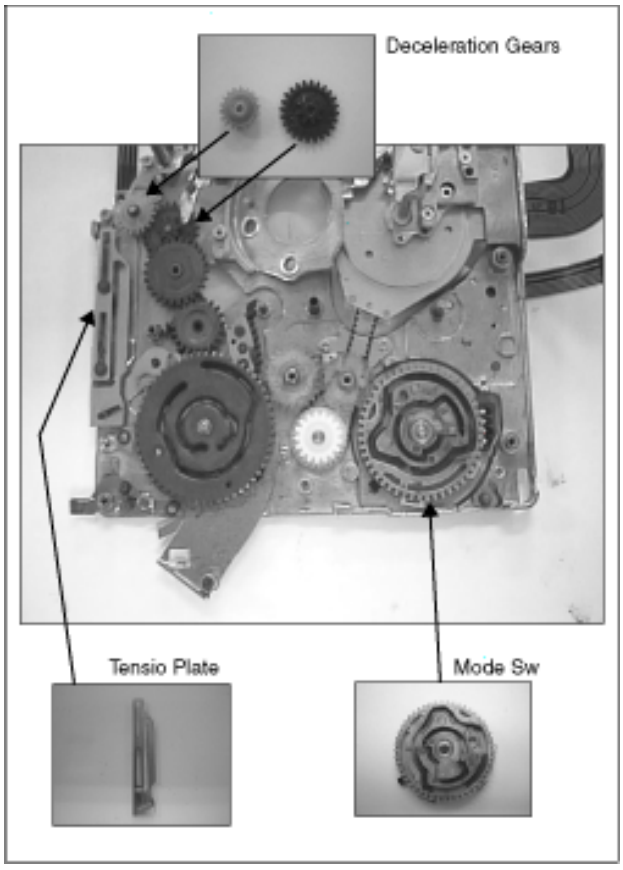


Fig. D19



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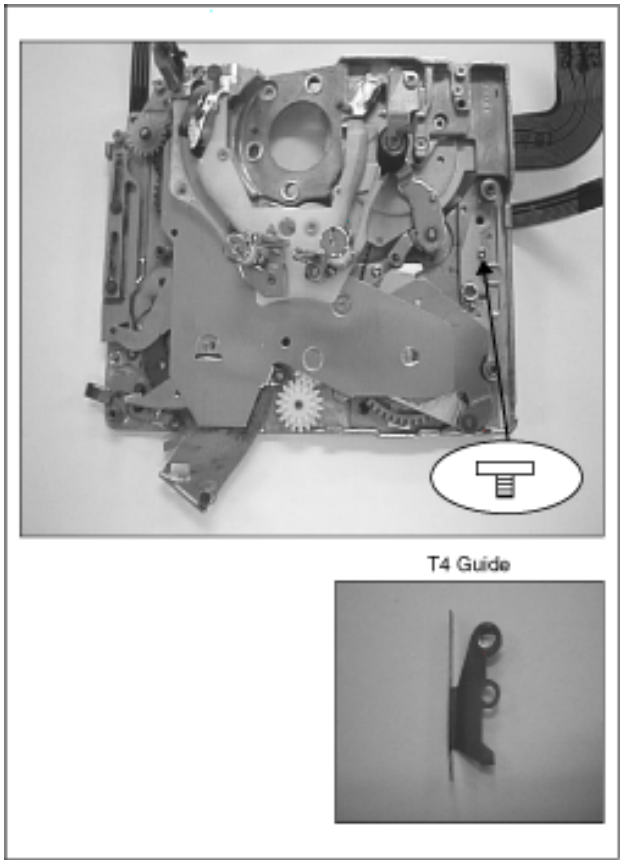

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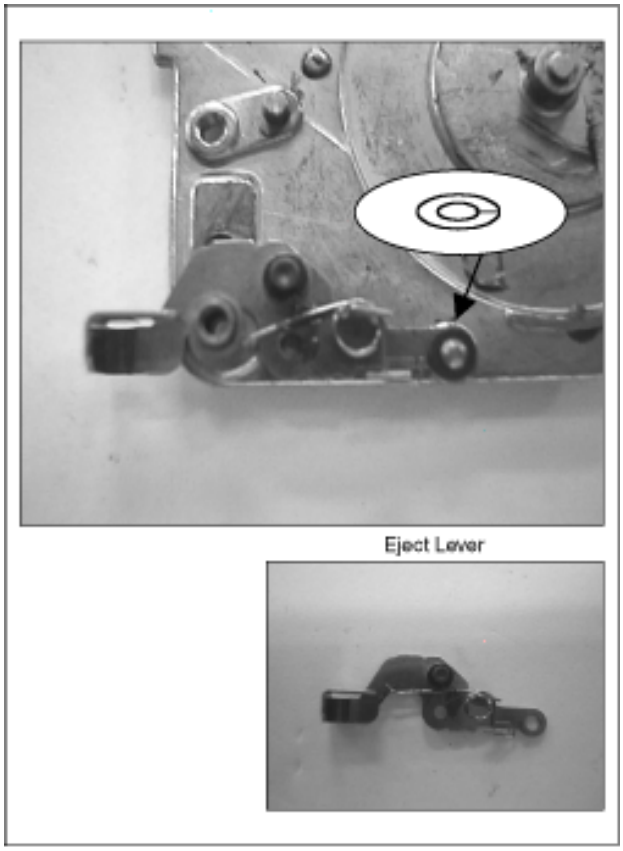

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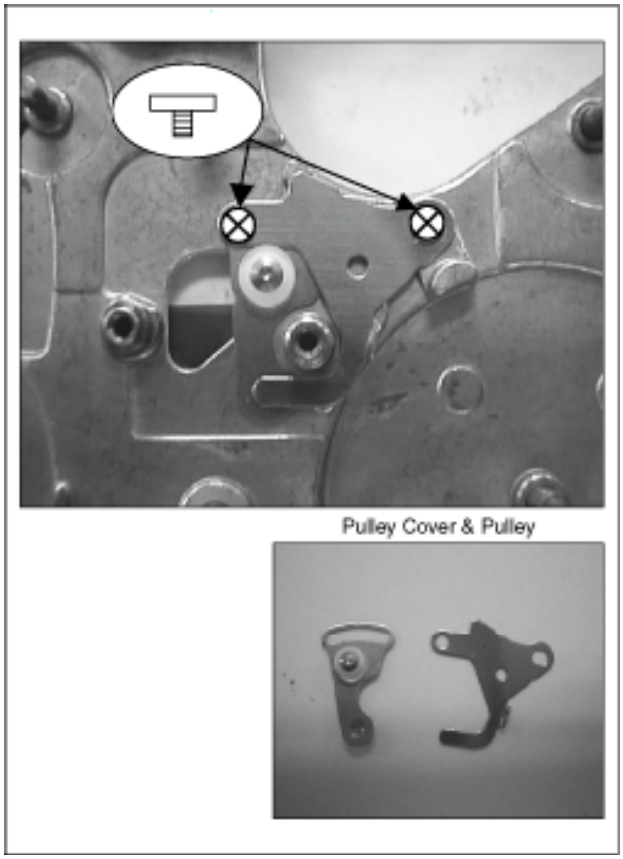
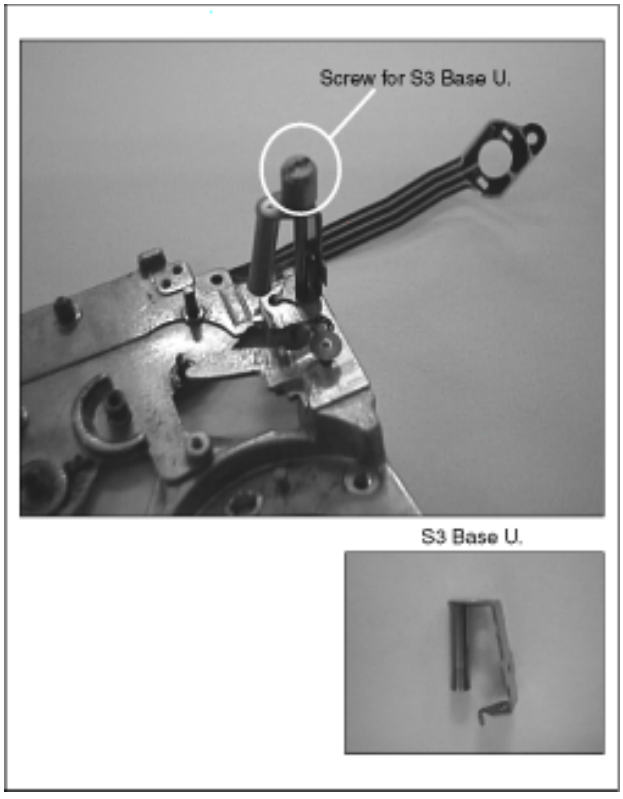


Fig. D21



4.1 ASSEMBLY PROCEDURE

TOP PREVIOUS NEXT

* 1) Procedure 20 for H.Amp Unit is applied only Q1 & Q2 mechanism.

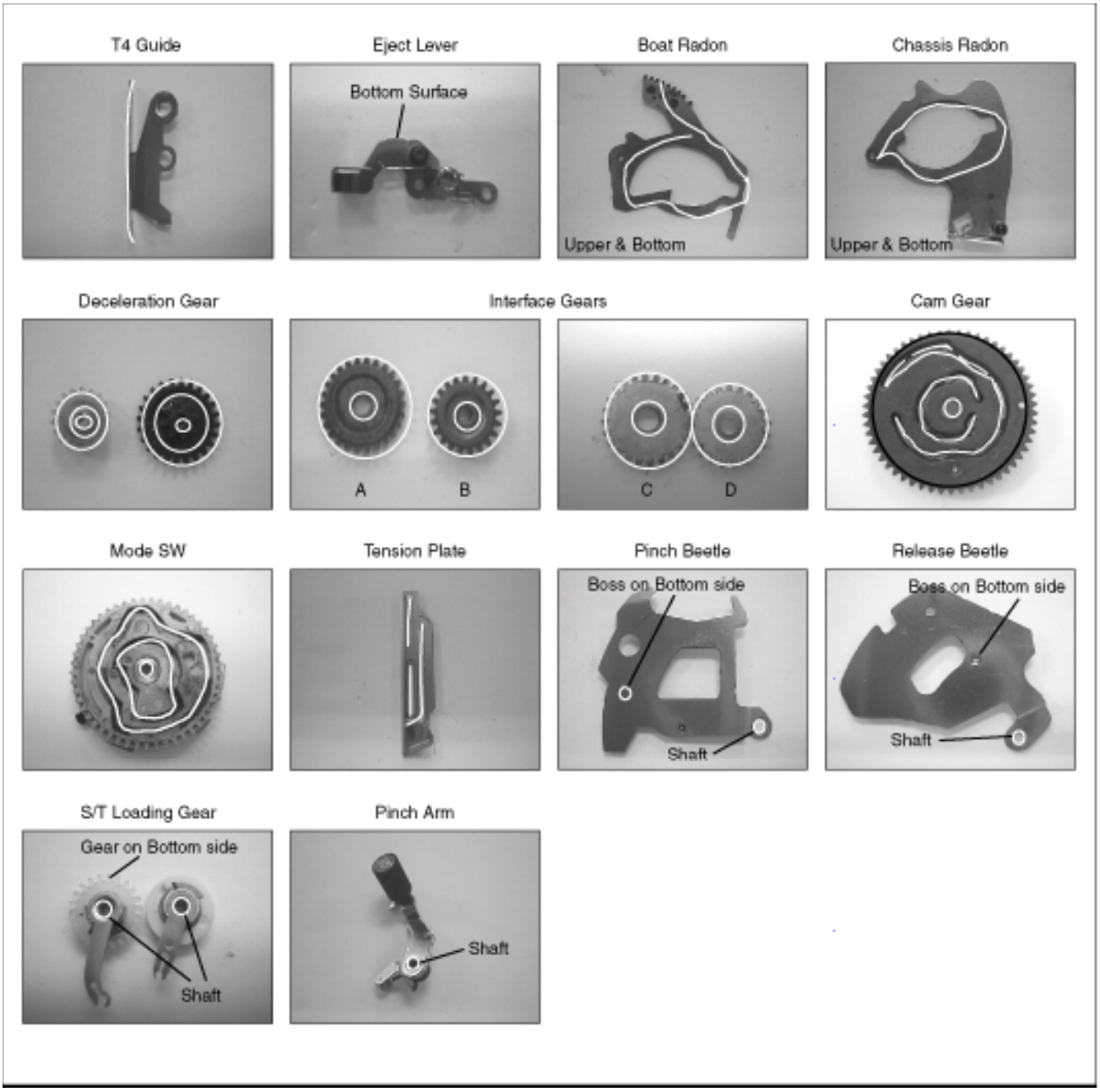
2) Procedure 1 - 3 can be changed in order.

No.	Item	Fig.	Grease	Procedure
*1	S3 Base U.	Fig. A1	--	1) Put S3 Base U on and tighten a screw.
*2	T4 Guide , Eject Lever, Pulley Cover & Pulley.	Fig. A2-1	•	1) Put hole of T4 Guide to hole of chassis and tighten a screw.
		Fig. A2-2	•	2) Put Eject Lever on and a washer.
		Fig. A2-3	--	3) Put boss of Pulley to hole of chassis on. Hole of chassis under pulley should be visible through slit of Pulley.
		Fig. A2-4	--	4) Put Pulley Cover on Pulley and tighten 2 screws.
*3	Mode Switch , Deceleration Gears & Tension Plate.	Fig. A3	•	1) Put Mode Sw on.
			•	2) Put Deceleration Gear (B) on
			•	3) Put Deceleration Gear (A) on and a washer.
			•	4) Put Tension Plate on and 2 washers.
4	Loading Motor unit & Mechanism Interface Flex.	Fig. A4	--	1) Put Loading Motor Unit on and tighten 2 screws.
			--	2) Put Mechanism Interface Flex on and tighten 4 screws. After that, solder at terminal of Mode Sw.
5	Capstan Holder & Capstan Motor	Fig. A5-1	--	1) Put Capstan Motor on and tighten 3 screws. Timing Belt should be between Pulley and boss.
		Fig. A5-2	--	2) Put Capstan Holder on and tighten 2 screws.
6	Drive Gear	Fig. A6	--	1) Put a washer to shaft and install Drive Gear. Timing Belt should be wound around Drive Gear. After that, confirm Timing Belt and Gear are rotated together.
7	Boat Radon	Fig. A7	•	1) Put hole of Boat radon to shaft of chassis.
8	Chassis Radon	Fig. A8	•	1) Put Chassis Radon and a washer on.
9	Cam Gear	Fig. A9	•	1) Put Cam Gear on. Phase Mark should be in the same line with chassis of shaft..
10	Interface Gears	Fig. A10-1	•	1) Put Interface Gear(C) & (D). Each phase mark should be in the same line.
		Fig. A10-2	•	2) Put Interface Gear(A) & (B) on.
11	Tension Lever & Eject Arm.	Fig. A11	--	1) Put boss of Tension Lever into slit of Cam Gear and Tension Plate, then tighten a screw.

				2) Put boss of Eject Arm into slit of Cam Gear. Put a washer on shaft of chassis.
12	Pinch Beetle & Release Beetle	Fig. A12	•	1) Put boss of Pinch Beetle into slit of Mode Sw.
				2) Put boss of Release Beetle into slit of Mode Sw.
				3) Put a washer on.
13	Gear Cover	Fig. A13	--	1) Keep sliding Gear Cover and put it on.
				2) Tighten a screw.
14	T-Loading Gear & S-Loading Gear	Fig. A14	•	1) Put S-Loading Gear on.
				2) Put T-Loading Gear on. Each phase mark should be in the same line.
15	Rail Unit	Fig. A15-1	--	1) Make half loading until Connection Arm comes out.
		Fig. A15-2	--	2) Connect Arm of S & T Loading Gear and Connection Arms. a) Hold Loading Gear side. b) Push Arm of S & Tloading Gear into slit of connection arms.
		Fig. A15-3	--	3) Tighten 4 screws.
16	Pinch Arm & Center Gear	Fig. A16-1	--	1) Put Center Gear Spacer on shaft of chassis.
				2) Put Center Gear on.
		Fig. A16-2	•	3) Make full loading position and put Pinch arm on, then put a washer on.
17	Sub Chassis Unit	Fig. A17-1	--	1) Make unloading position until moving Release Beetle Confirm spring is exist.
		Fig. A17-2		2) Put Sub Chassis Unit on as pre-installation.
		Fig. A17-3		3) Tighten 3 screws. Make Loading position until 1 screw position appears, then tighten a screw.
		Fig. A17-4		4) Tighten a screws at Flex Holder portion and Hook spring back to Pinch Arm.
18	LED Holder, Cover plate & Idler U.	Fig. A18-1	--	1) Put Idler U into shaft of Drive Gear.
		Fig. A18-2	--	2) Put Cover Plate on and tighten 5 screws, then hook 2 springs to 2hooking portion of Sub chassis. And also put LED Flat Cable back.
		Fig. A18-3		3) Put LED Holder back.
19	Confirmation of Mechanism movement , Cylinder Unit & RT Flex. Flame.	Fig. A19-1	--	1) Confirm loading and unloading is smooth.
		Fig. A19-2	--	2) Put Cylinder Unit & Spring on and tighten 3 screws.
		FIg. A19-3	--	3) Put RT Flex. Flame on and tighten 2 screws.
*20	H Amp Unit. (Only Q1 & Q2)	Fig. A20-1	--	1) Put H Amp Unit on and tighten a screw at bottom of chassis.
		Fig. A20-2		2) Connect Cylinder Flex to connector.

		Fig. A20-3		3) Put Shield case on and tighten a screw.
21	Cassette Up Unit.	Fig. A21-1	--	1) Put both S &T sides to coupling portion on.
		Fig. A21-2		2) Tighten 3 screws. (Q1 &2 have 4 screws)

The following parts should be applied Molyton Grease (VFK1024).



How to use washer jigs.

No.	Item	Fig.	Procedure

1	Washer Jigs	Fig. W1-1	1) Each Washers.
2		Fig. W1-2	1) Put a washer on tip of Jig.
3		Fig. W1-3	1) Put Jig on shaft.
4		Fig. W1-4	1) Put a washer on shaft by pressing Jig.

Fig. W1-1

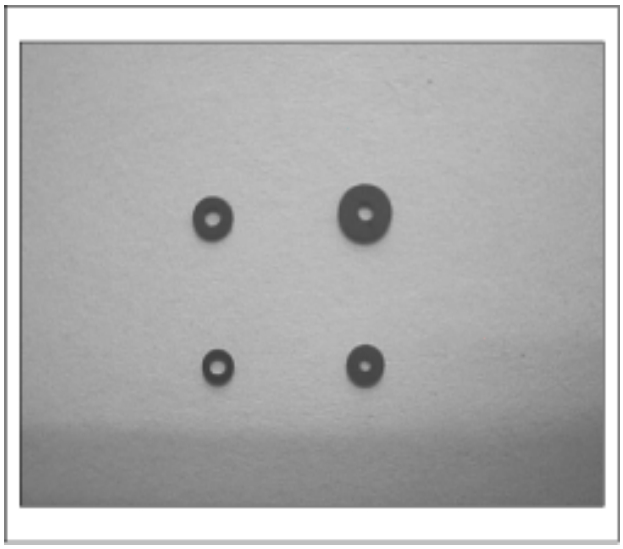


Fig. W1-2

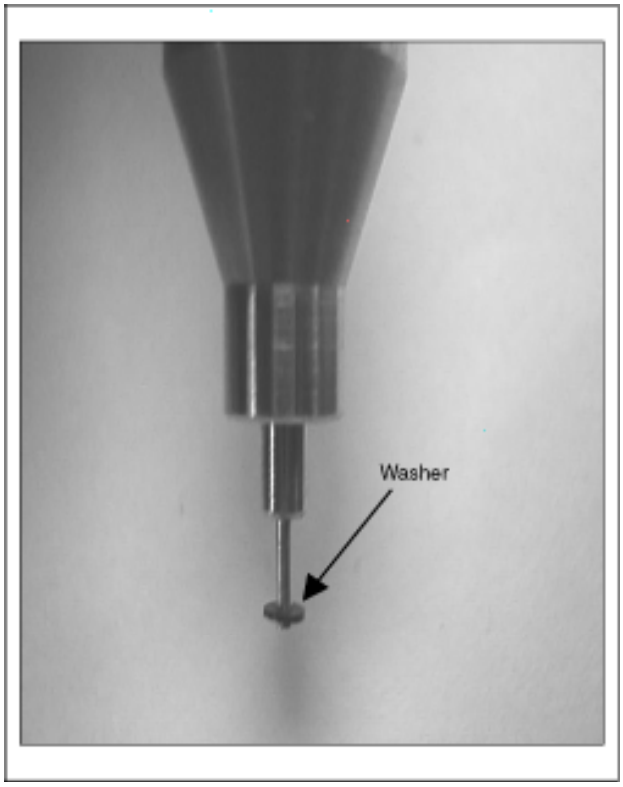


Fig. W1-3

Fig. W1-4

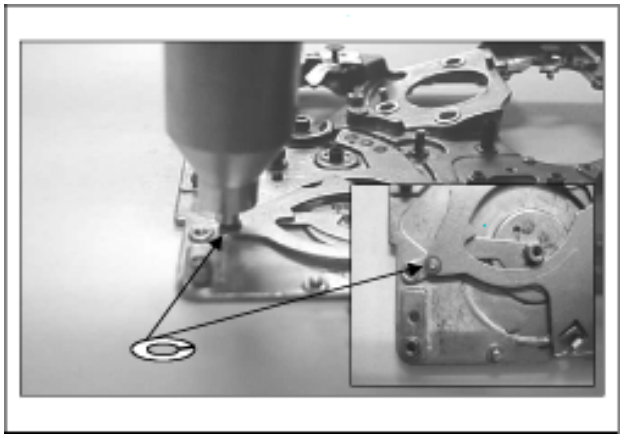


Fig. A1

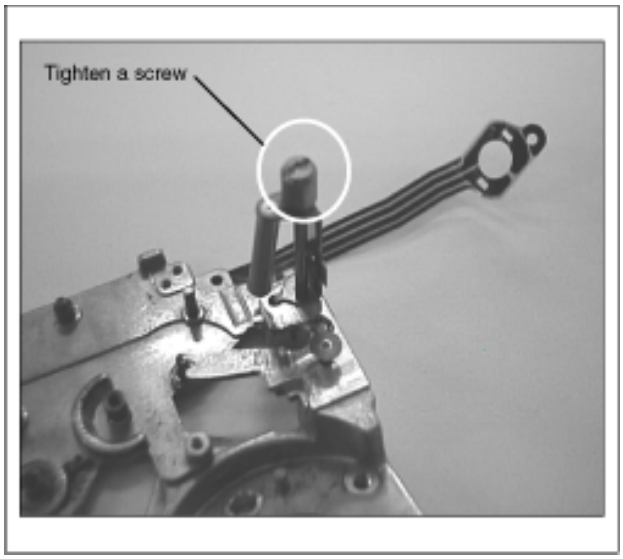


Fig. A2-1

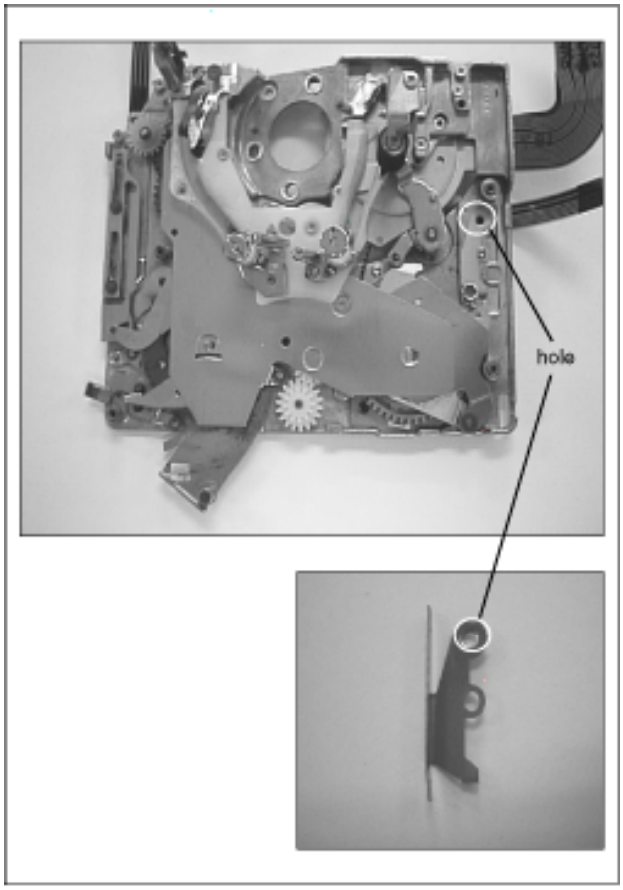


Fig. A2-2

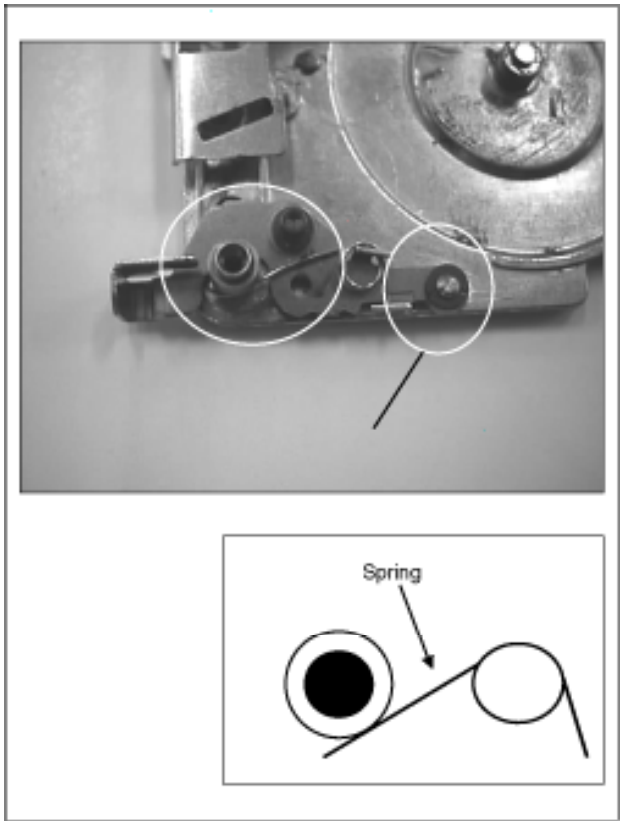


Fig. A2-3

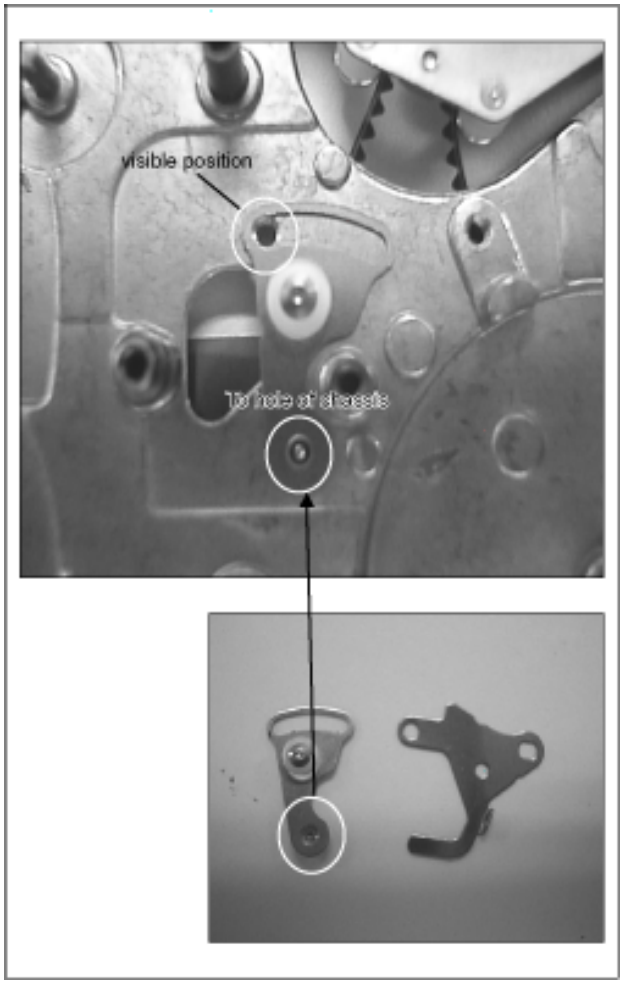


Fig. A2-4

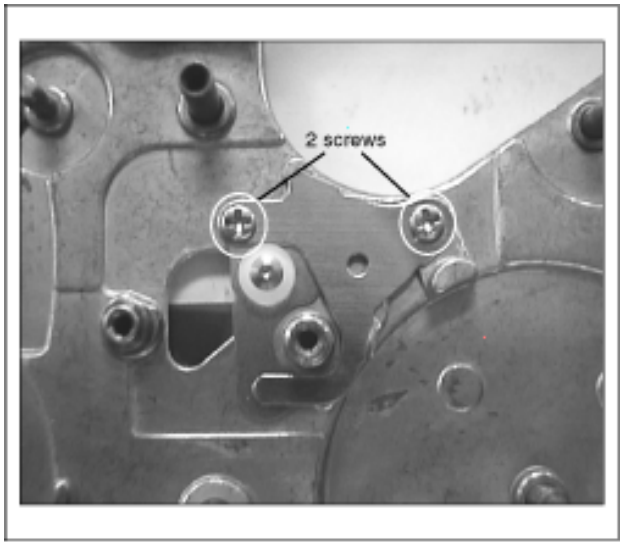


Fig. A3

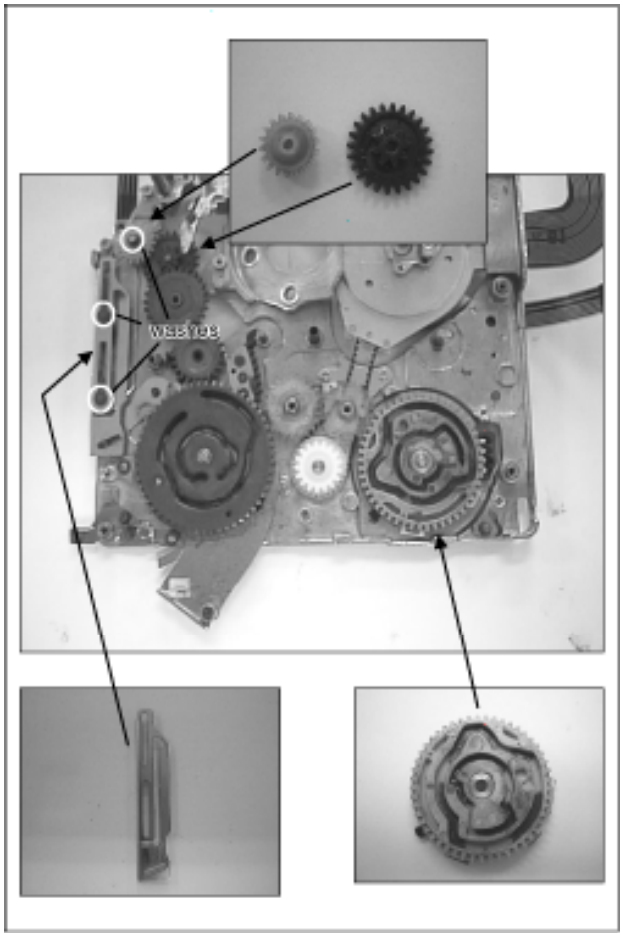


Fig. A4

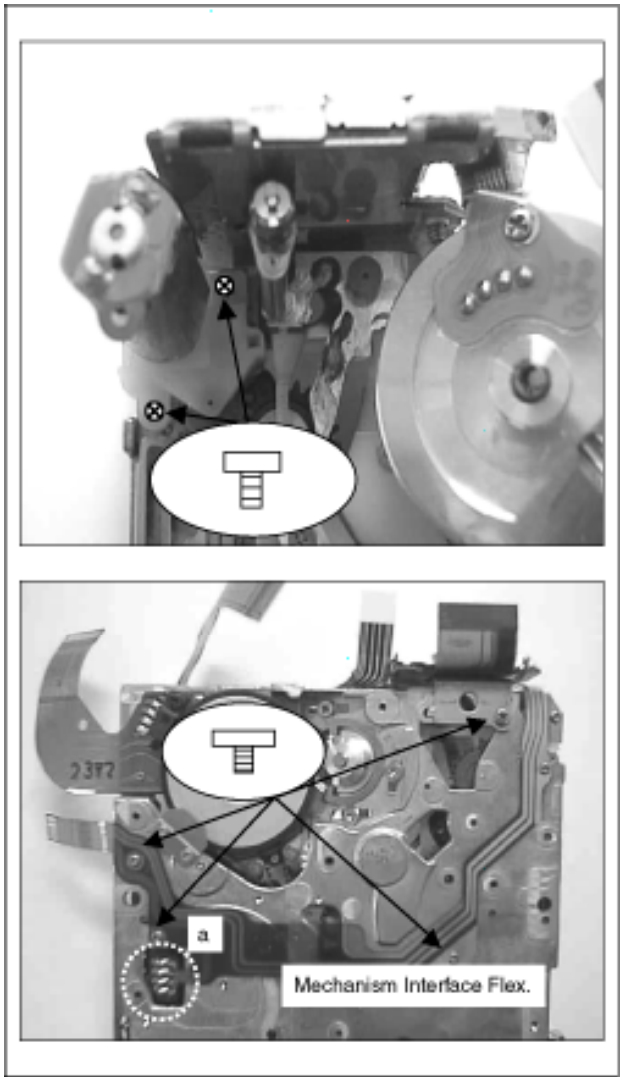


Fig. A5-1

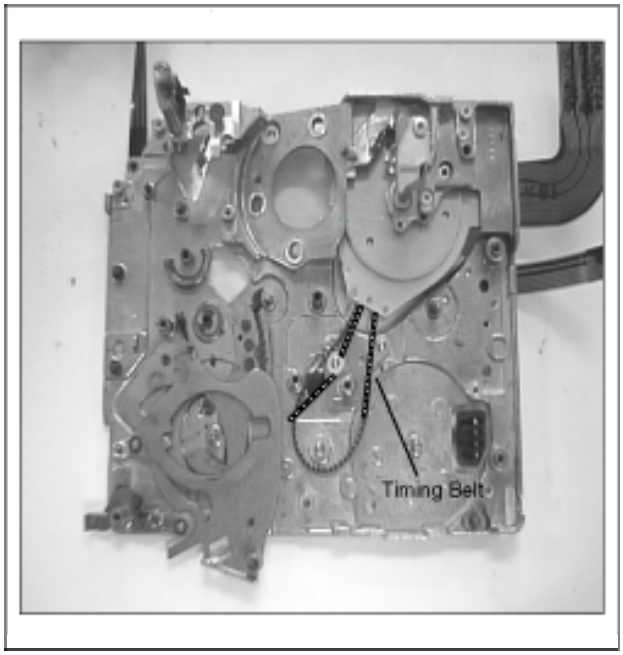


Fig. A5-2

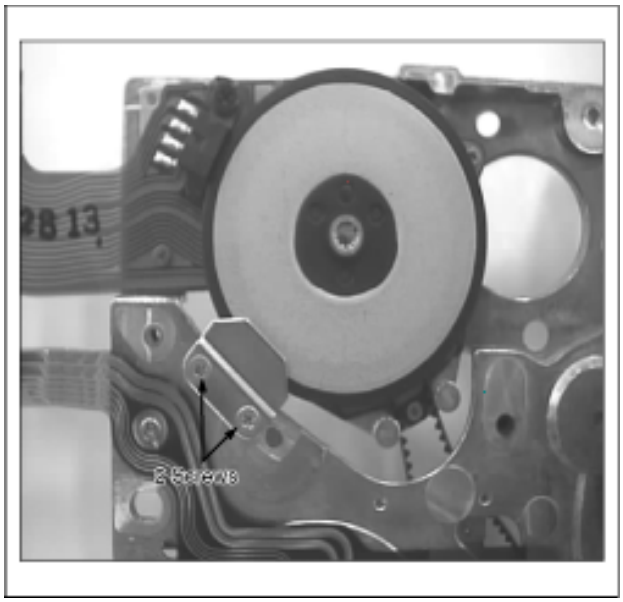


Fig. A6

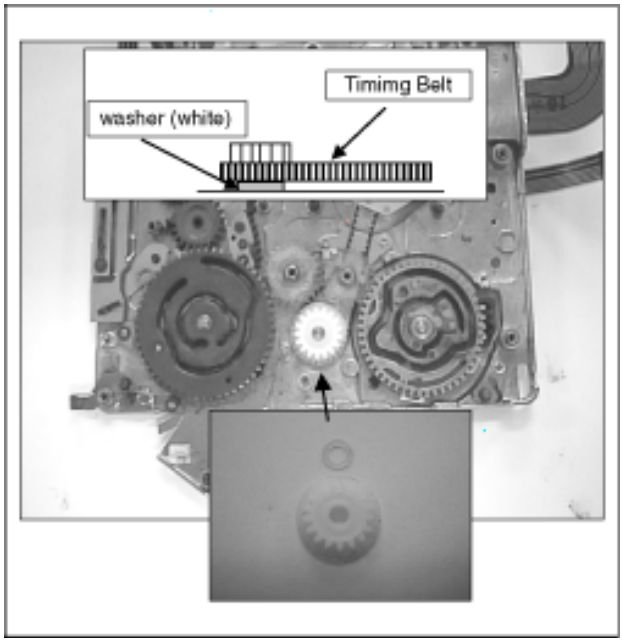


Fig. A7

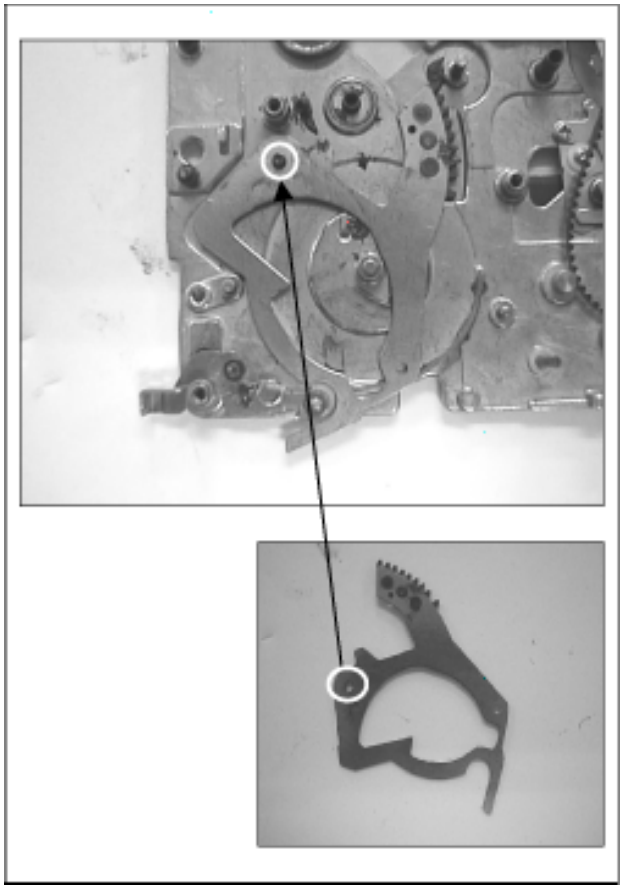


Fig. A8

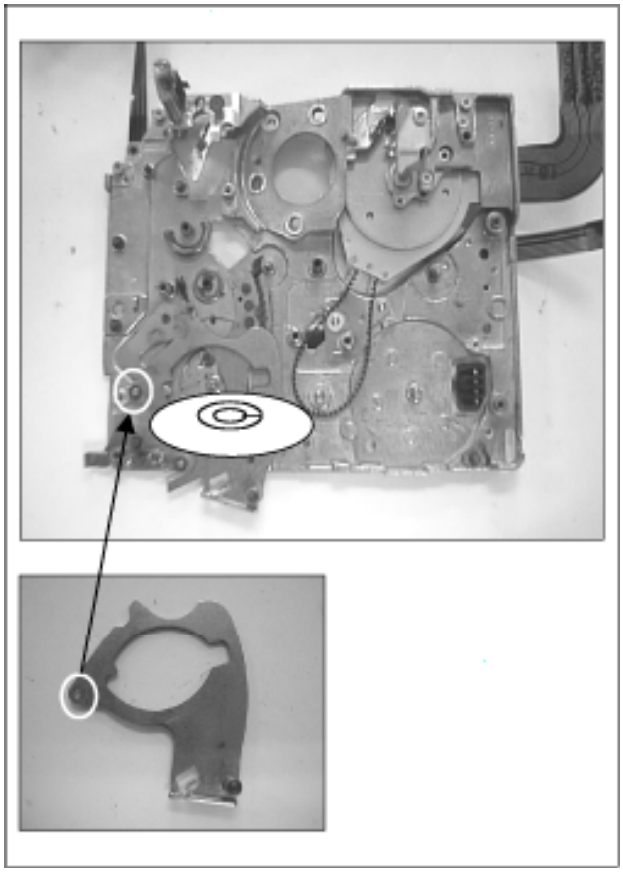


Fig. A9

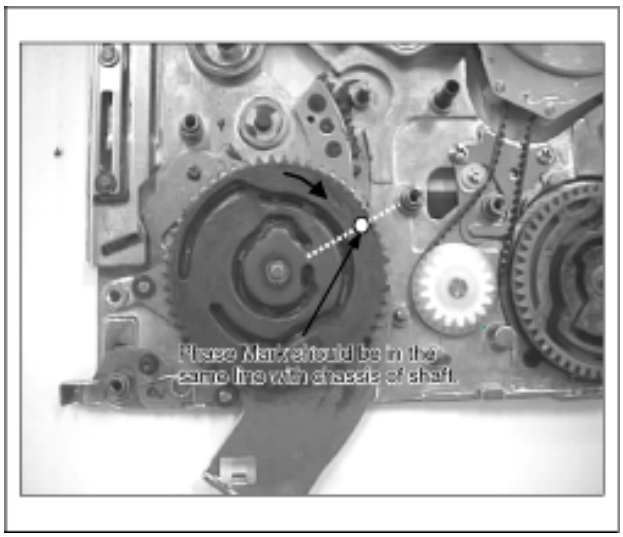


Fig. A10-1

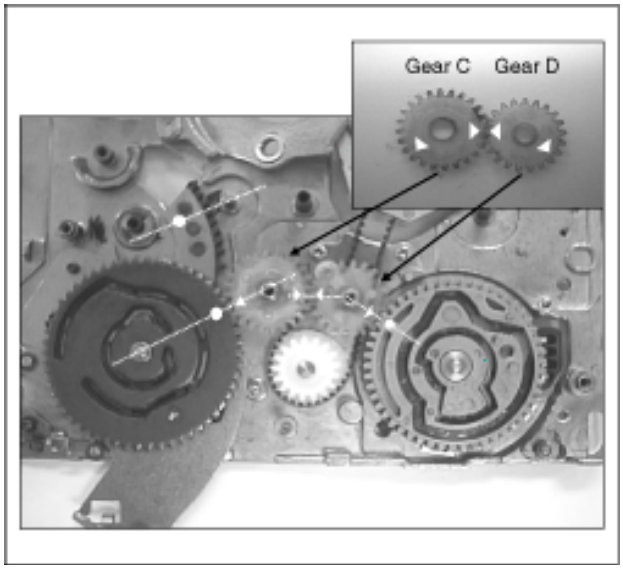


Fig. A10-2

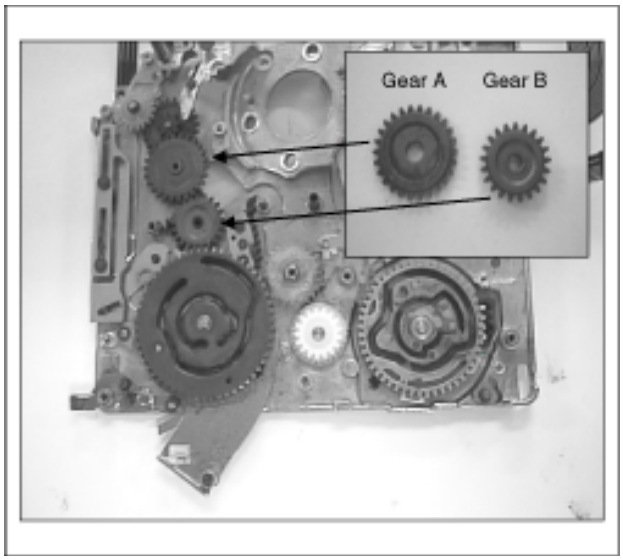


Fig. A11

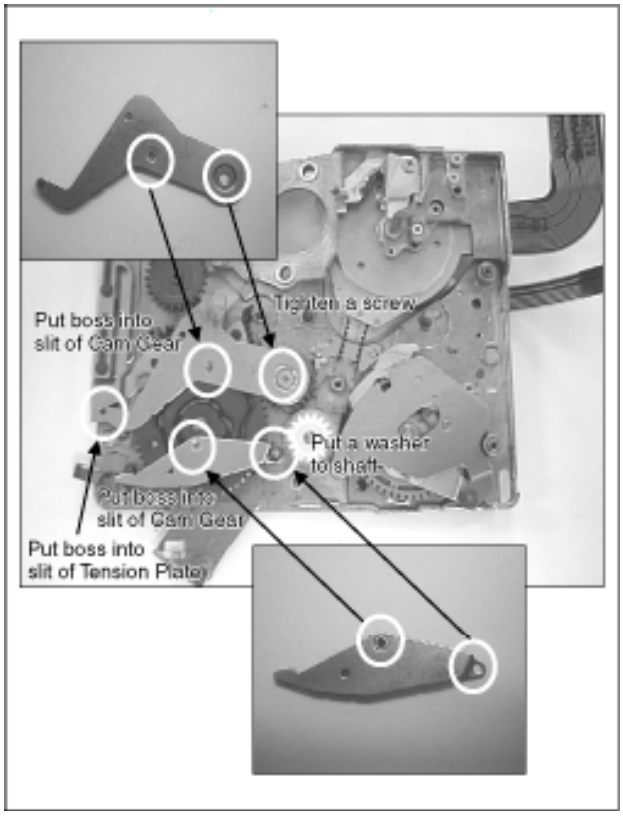

Put boss into slit of Cam Gear
Tighten a screw
Put a washer to shaft
Put boss into slit of Cam Gear
Put boss into slit of Tension Plate

Fig. A12

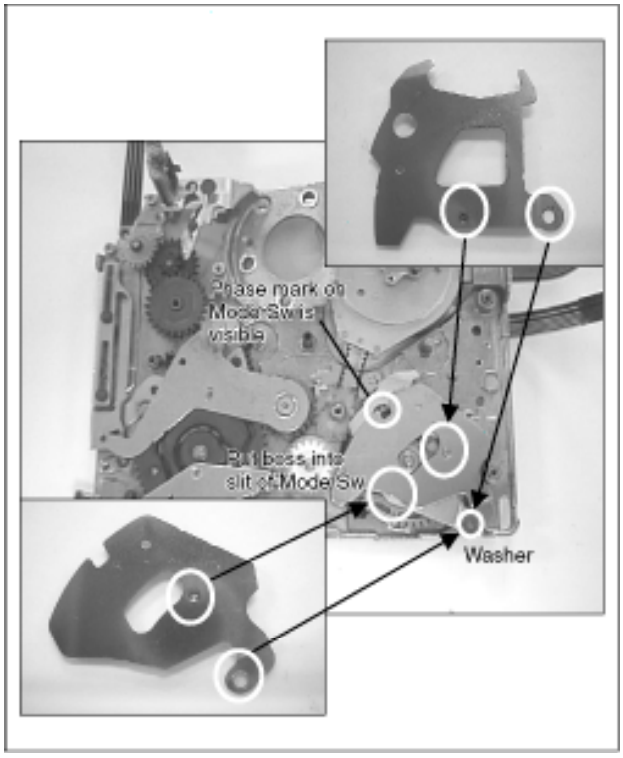


Fig. A13

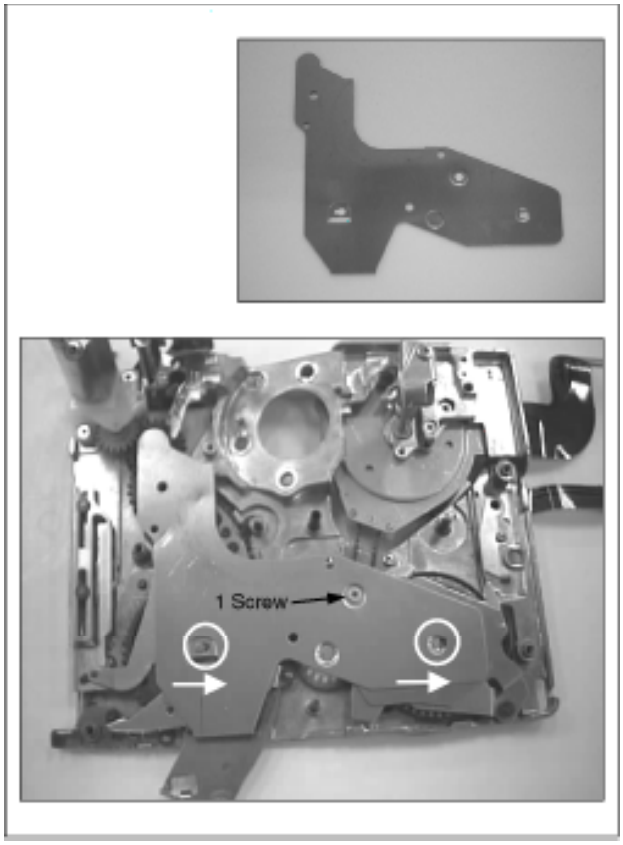


Fig. A14

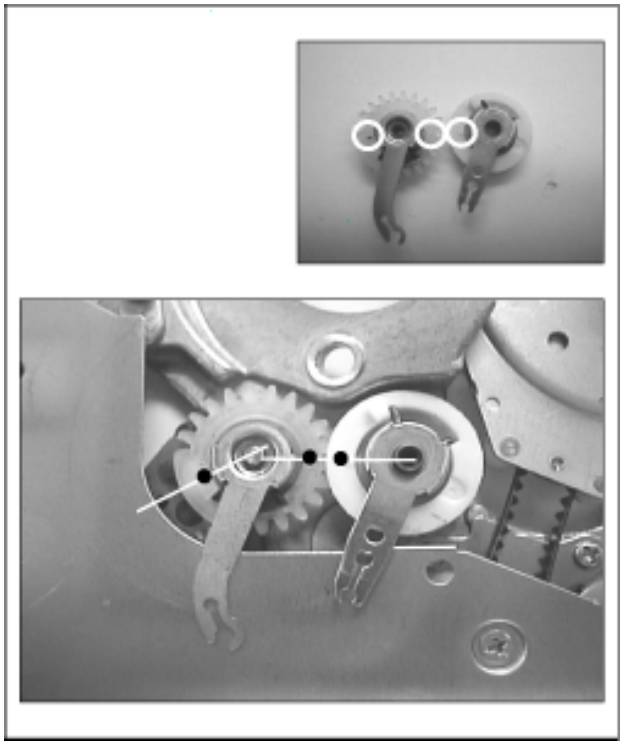


Fig. A15-1

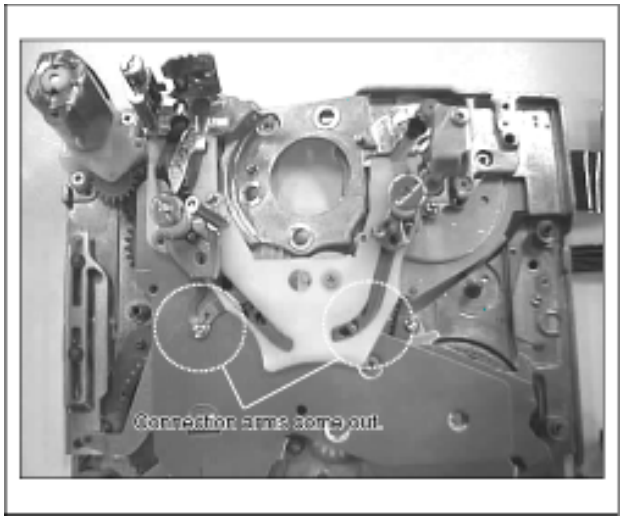


Fig. A15-2

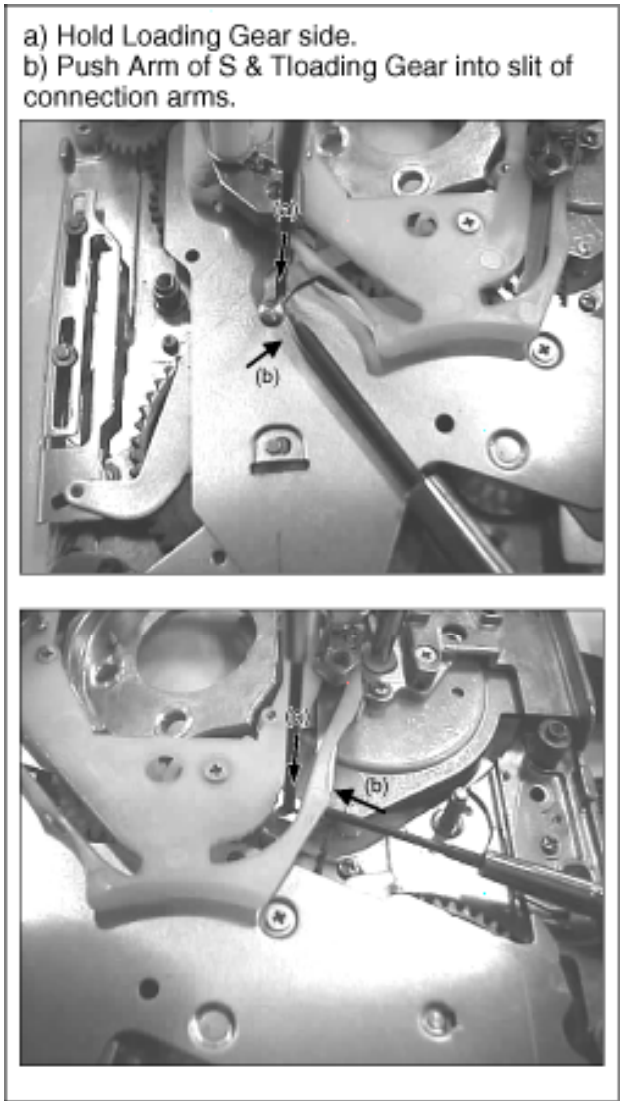

a) Hold Loading Gear side.
b) Push Arm of S & Tloading Gear into slit of connection arms.
(a)
(b)
(a)
(b)

Fig. A15-3

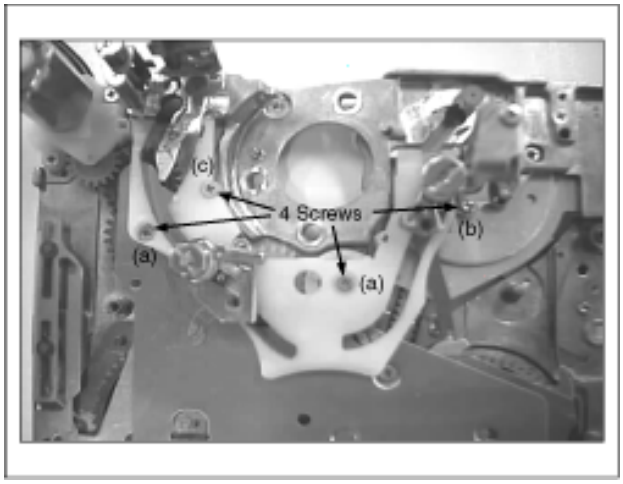

(c)
4 Screws
(b)
(a)
(a)

Fig. A16-1

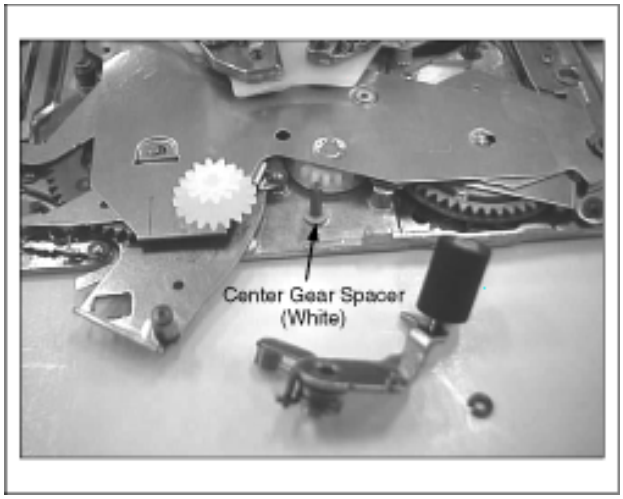


Fig. A16-2

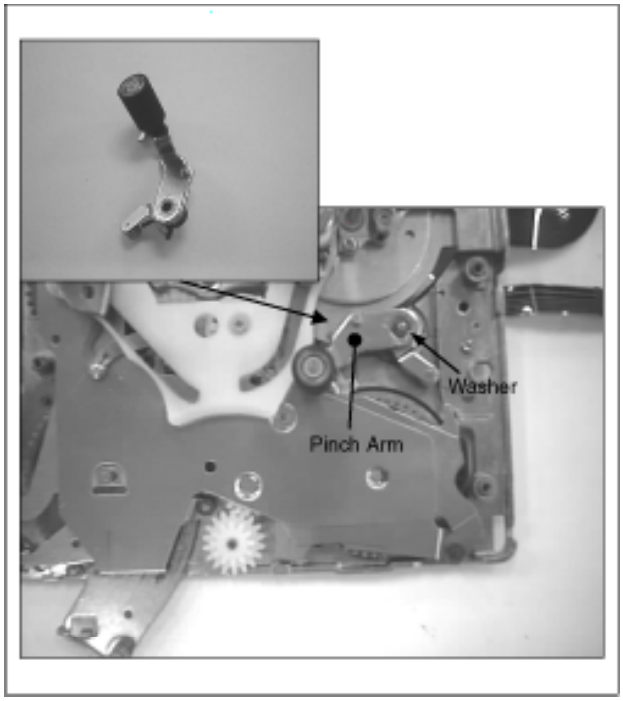


Fig. A17-1

Bottom Side of Take up

Fig. A17-2

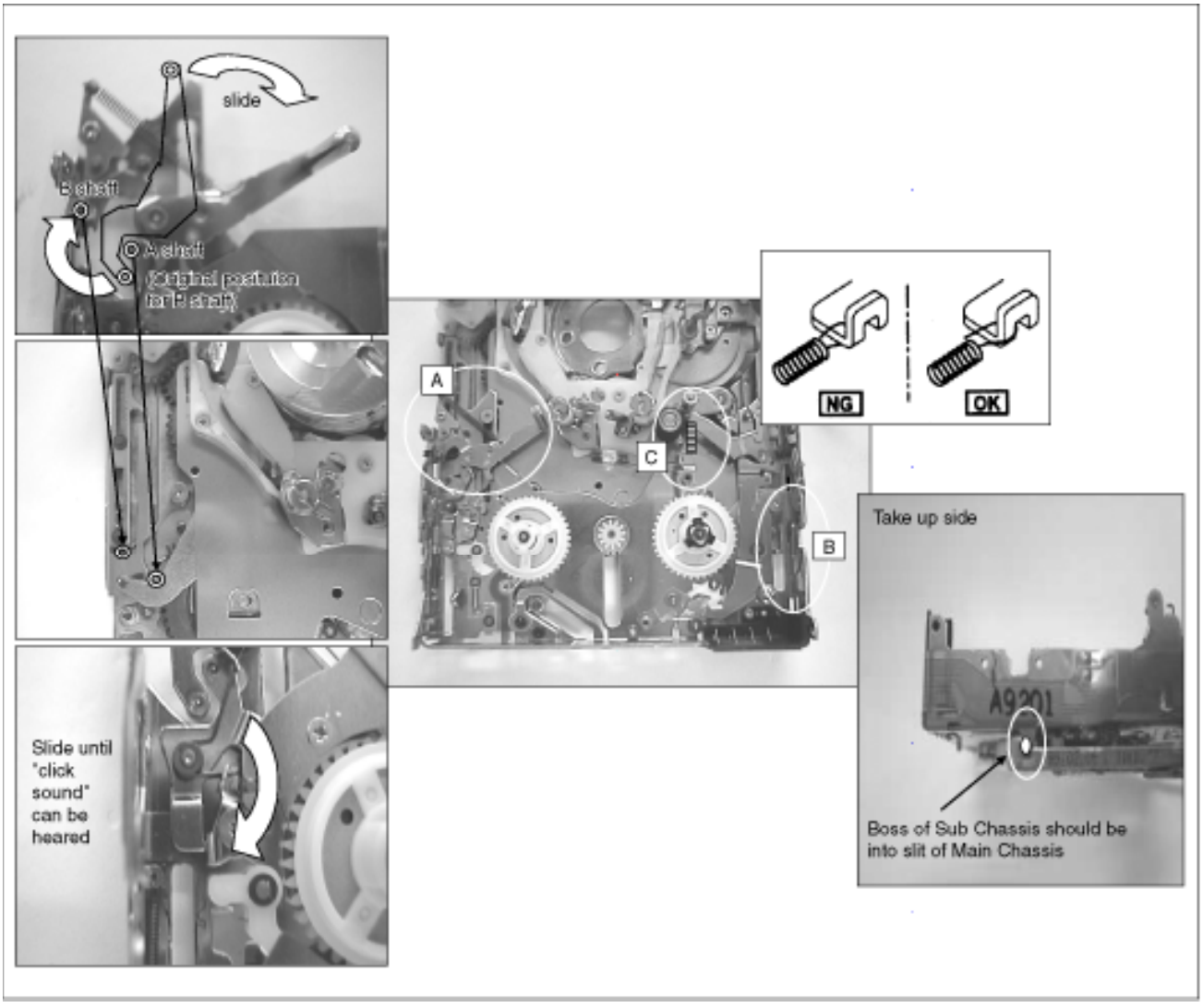

slide
B shaft
A shaft
(Original position for B shaft)
A
C
B
NG
OK
Take up side
A9201
Boss of Sub Chassis should be into slit of Main Chassis
Slide until "click sound" can be heared

Fig. A17-3

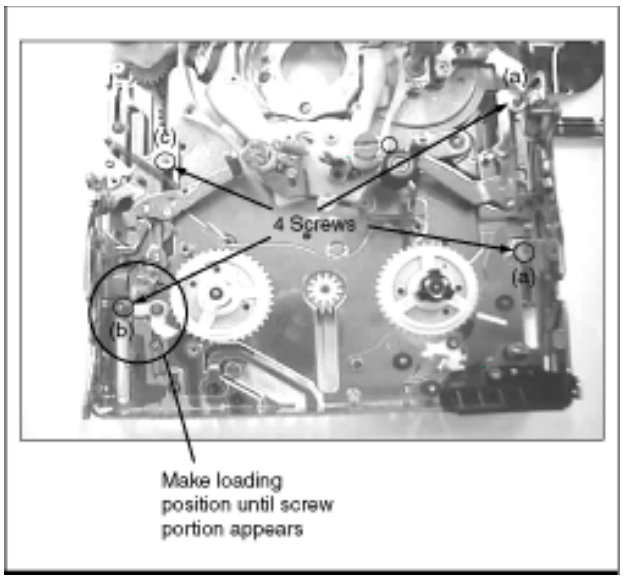


Fig. A17-4

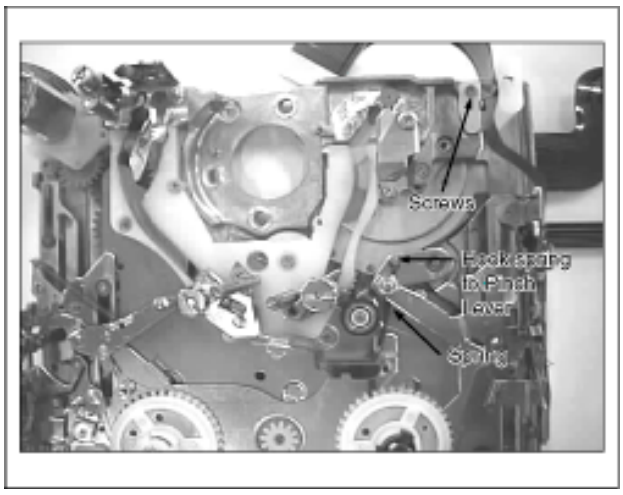


Fig. A18-1

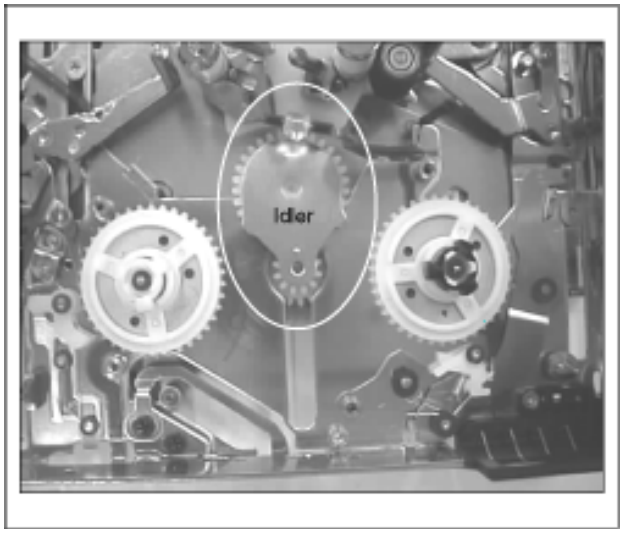


Fig. A18-2

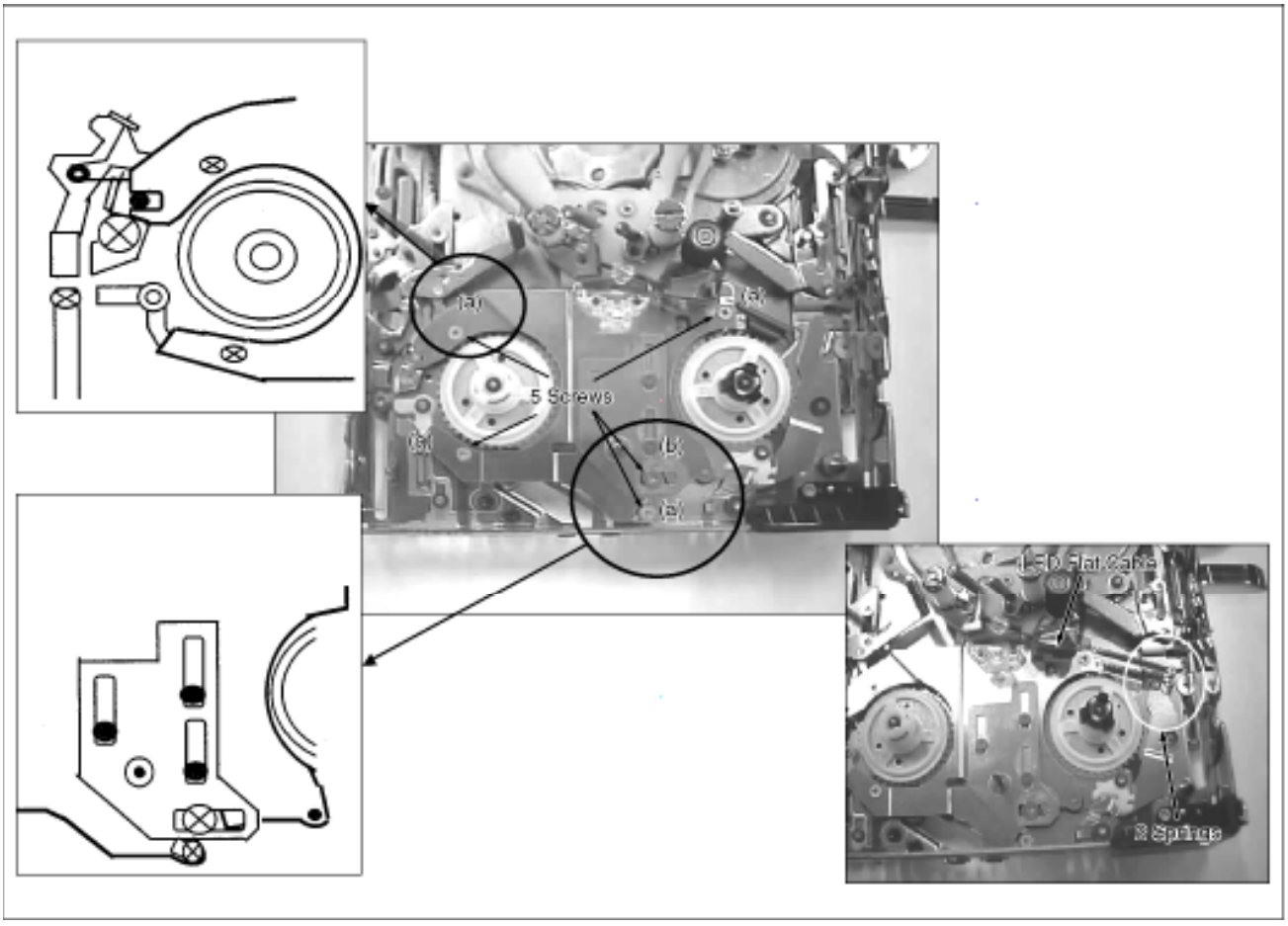


Fig. A18-3

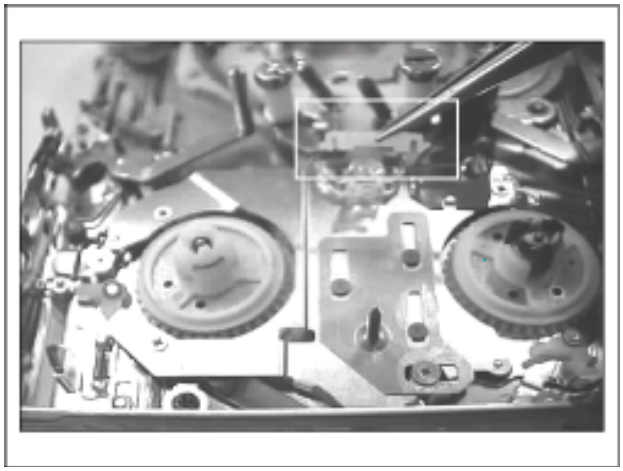


Fig. A19-1

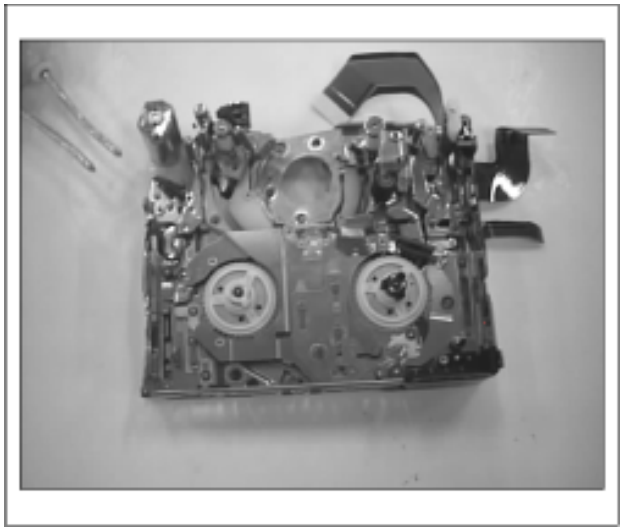


Fig. A19-2

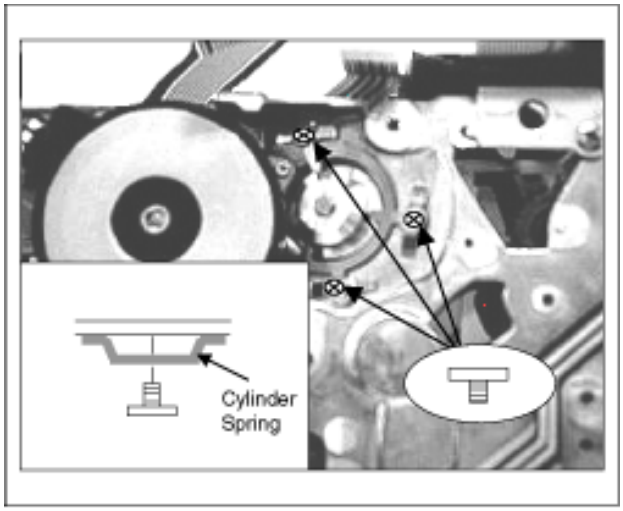


FIg. A19-3

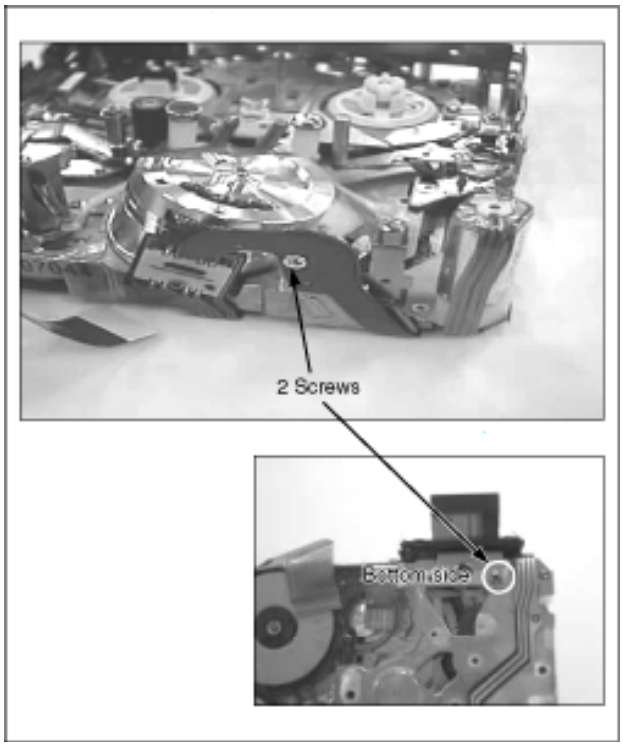


Fig. A20-1

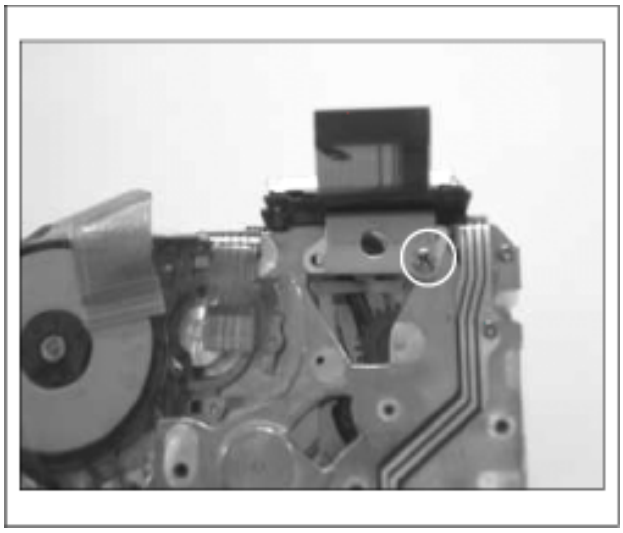


Fig. A20-2

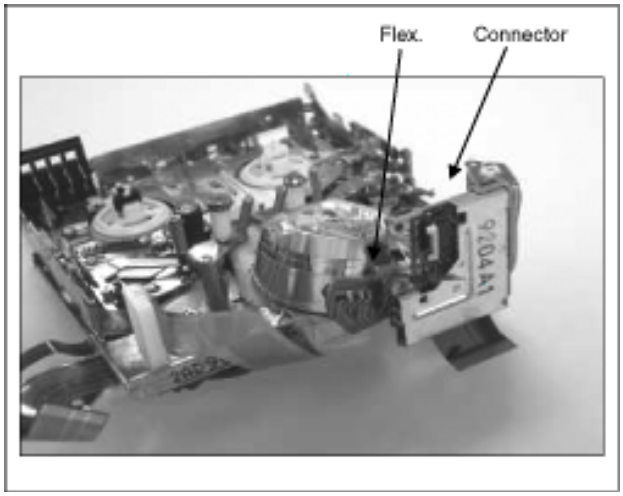


Fig. A20-3

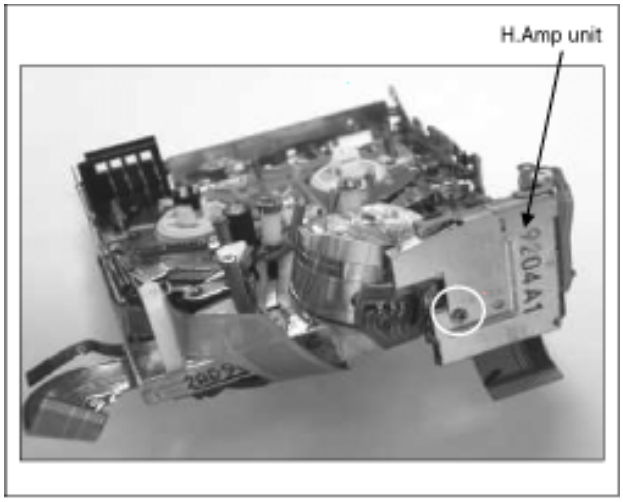


Fig. A21-1

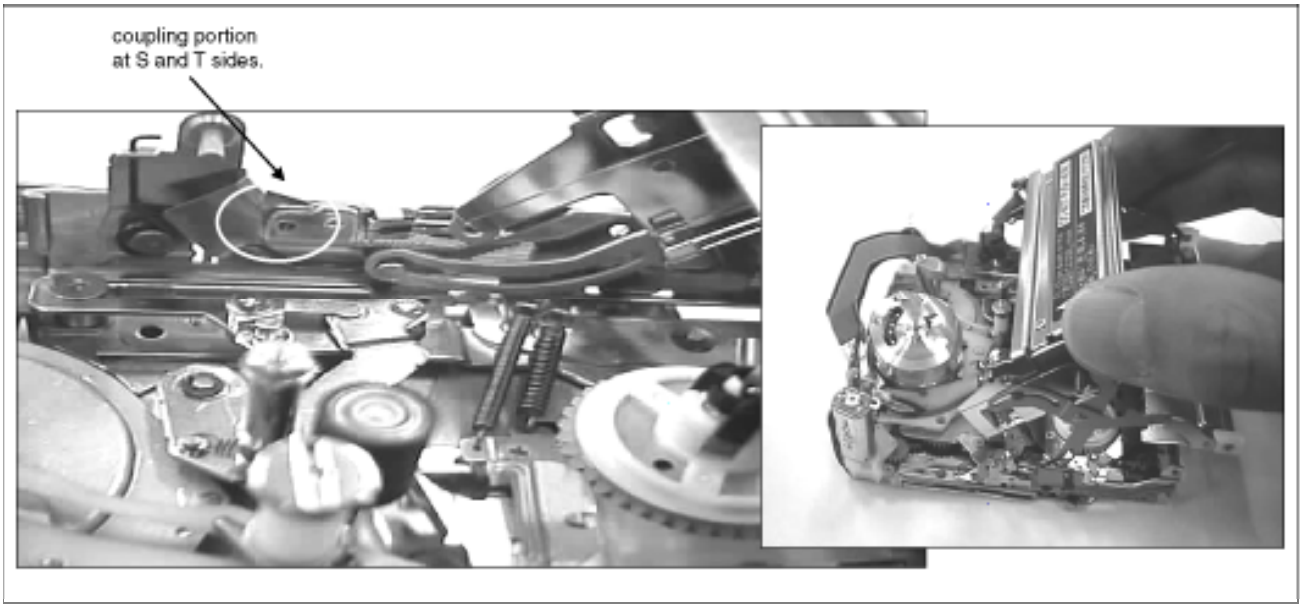


Fig. A21-2

TOP PREVIOUS NEXT

5.1 MECHANICAL ADJUST TABLE

TOP PREVIOUS NEXT

* 1) H.Amp Unit is applied only Q1 & Q2 mechanism.

No.	Item	Confirmation of Tape Running	Linearity Adjustment	Confirmation of B.E.R. Value	Capstan tilt Adjustment	S3 Base adjustment	Sub Chassis Adjustment
1	MECHANISM CHASSIS	--	--	•	--	--	--
2	Cassette Up Unit.	--	--	--	--	--	--
*3	H Amp Unit.	--	--	•	--	--	--
4	Cylinder Unit	•	•	•	--	--	--
5	RT Flex. Flame.	--	--	--	--	--	--
6	LED Holder	--	--	--	--	--	--
7	Cover Plate	--	--	--	--	--	--
8	Idler U.	--	--	•	--	--	--
9	Sub Chassis Unit	•	•	•	--	--	•
10	Pinch Arm	•	•	•	--	--	--
11	Center Gear	--	--	•	--	--	--
12	Rail Unit	•	•	•	--	--	--
13	S-Loading Gear	--	--	•	--	--	--
14	T-Loading Gear	--	--	•	--	--	--
15	Gear Cover	--	--	•	--	--	--
16	Pinch Beetle	--	--	•	--	--	--
17	Release Beetle	--	--	•	--	--	--
18	Tension Lever	•	•	•	--	--	--
19	Eject Arm	--	--	--	--	--	--
20	Interface Gears	--	--	•	--	--	--
21	Cam Gear	--	--	•	--	--	--
22	Chassis Radon	--	--	--	--	--	--
23	Boat Radon	--	--	--	--	--	--
24	Drive Gear	--	--	•	--	--	--
25	Capstan Holder	--	--	--	--	--	--
26	Capstan Motor	•	•	•	•	--	--
27	Loading Motor Unit	--	--	--	--	--	--

28	Mechanism Interface Flex.	--	--	--	--	--	--
29	Mode Switch	--	--	--	--	--	--
30	Deceleration Gears	--	--	•	--	--	--
31	Tension Plate	•	•	•	--	--	--
32	T4 Guide	--	--	--	--	--	--
33	Eject Lever	--	--	--	--	--	--
34	Pulley Cover	--	--	--	--	--	--
35	Pulley	--	--	--	--	--	--
36	S3 Base U.	•	•	•	--	•	--

TOP PREVIOUS NEXT

5.2 MECHANICAL ADJUSTMENT PROCEDURE

TOP PREVIOUS NEXT

No.	Item	Equipment	Fig.	Procedure
1	Confirmation of Tape Running	1. Alignment Tape (PAL: VFM3110EDS/NTSC: VFM3010EDS) 2. Post Adjustment Driver(VFK1278)	Fig. AD1-1	1) Confirm each post position in playback mode.
			Fig. AD1-2	2) Confirm condition of tape regulation in playback & review mode.
2	Linearity Adjustment	1.Tatsujin system(Refer to Fig.)	Fig. AD2-1	1) Set up Tatsujin System.
		2. Alignment Tape (PAL: VFM3110EDS/NTSC: VFM3010EDS) 3. Envelope Detecor Board (VFK1641) 4. Post Adjustment Driver (VFK1278)	Fig. AD2-2	2) Connect Envelope Detector Board between Measuring Board & Oscilloscope.
			--	3) Remove Adjustment Cover. * Location for Adjustment Cover depends on Models.
			Fig. AD2-3	4) Playback the Alignment Tape and adjust S2 & T3 posts by Screw Driver until wavefom becomes flat. After adjustment, B.E.R. should be confirmed by Electrial adjustment on the "Tatsujin".
3	Confirmation of B.E.R. Value	1.Tatsujin system(Refer to Fig.)	Fig. AD2-1	1) Refer to Electrical Adjustment on the "Tatsujin".
4	Capstan tilt Adjustment	1. Capstan Tilt Adj. Jig(VFK1638) 2. Small Phillips Screw Driver	Fig. AD4-1	1) Slide sensor pin to Capstan shaft. After touching,if OK, LED should be lit. * Do not touch when you confirm LED lit or not.
			Fig. AD4-2	2) If Ng, Capstan tilt should be adjusted. a) Tighten screw (A) until LED is lit. b) Loose screw (B) until LED is not lit. c)Tightenscrew (A) unti-clockwise until LED is lit .
5	S3 Base adjustment	1. Post Adjustment Driver(VFK1278)	Fig. AD5-1	1) Adjust S3 screw as Evvelope becomes flat.
			Fig. AD5-2	2) Tighten a screw 180 degree as "ENV 1". 3) Loosen a screw as ENV 2. 4) Tighten a screw until ENV becomes flat as ENV 3 and tighten a screw 180 degree again.
6	Sub Chassis Adjustment	1. Small Phillips Screw Driver	Fig. AD6-1	1) Make Review Position. * Set Loading mode and then,stop Pinch Roller & Capstan shaft is touched.

			Fig. AD6-2	2) Loosen a screw. After fixing a shaky Sub Chassis,then tighten a screw.

Fig. AD1-1

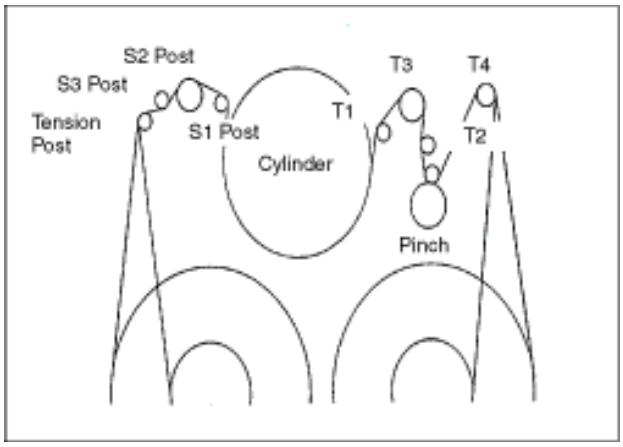


Fig. AD1-2

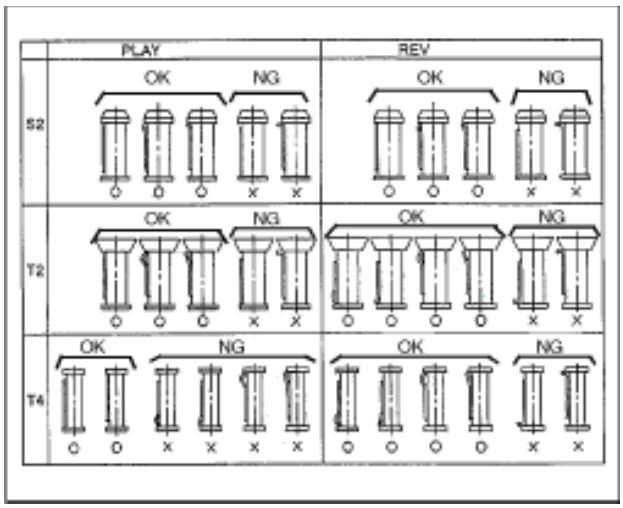


Fig. AD2-1

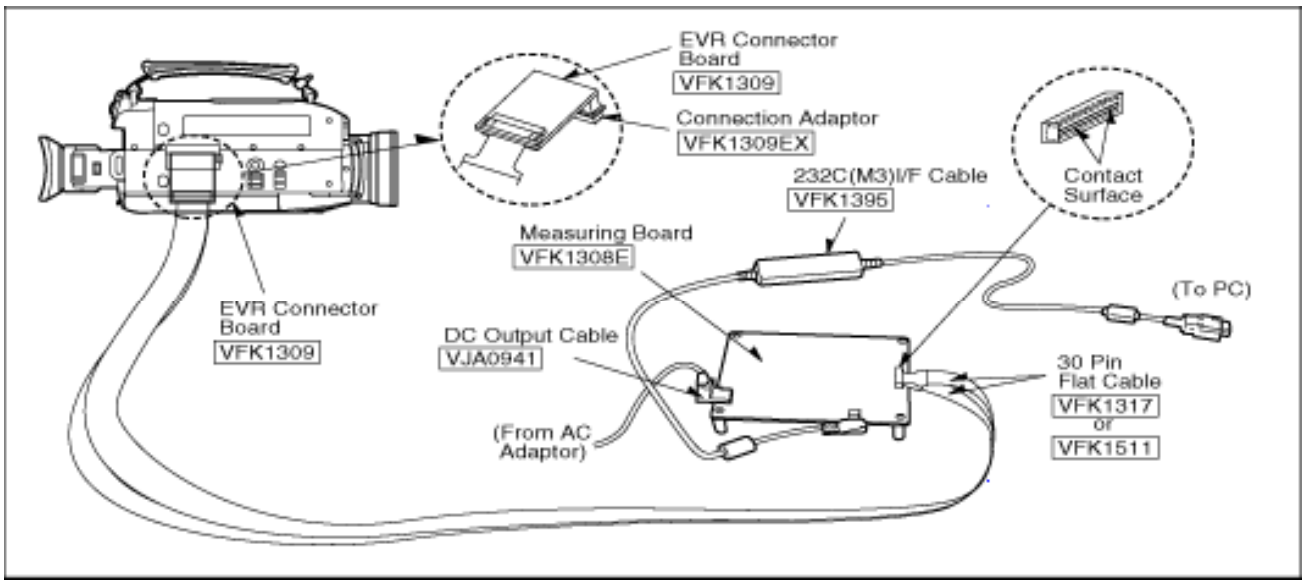


Fig. AD2-2

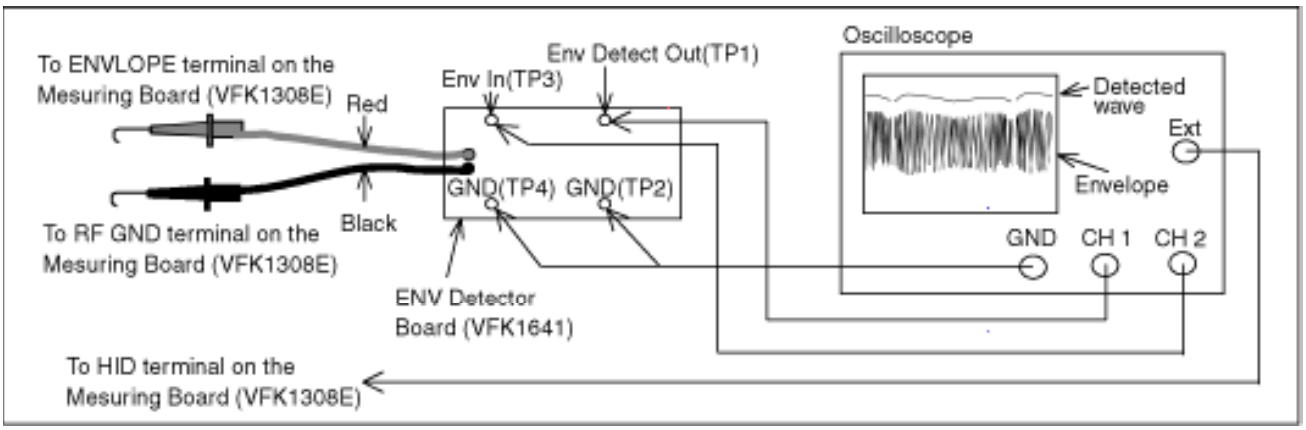


Fig. AD2-3

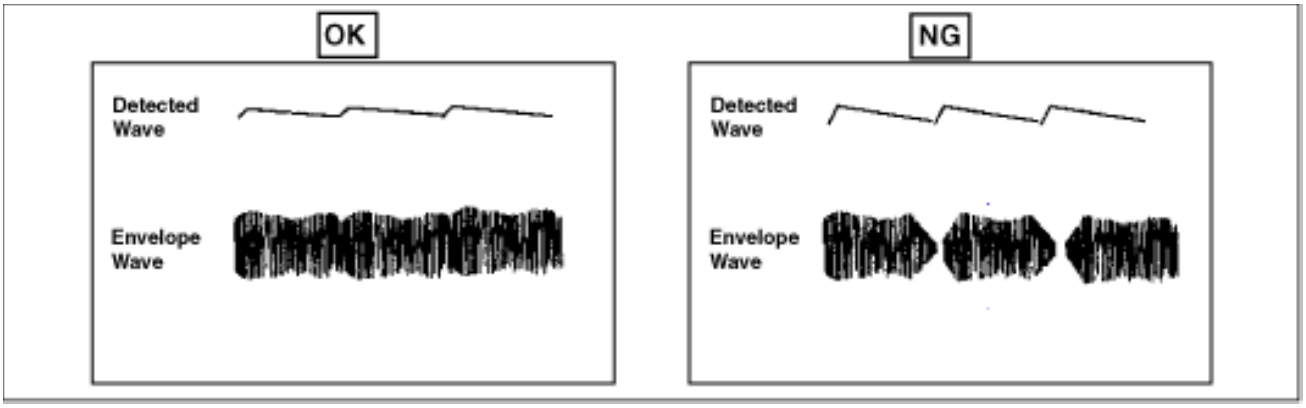


Fig. AD4-1

Fig. AD4-2

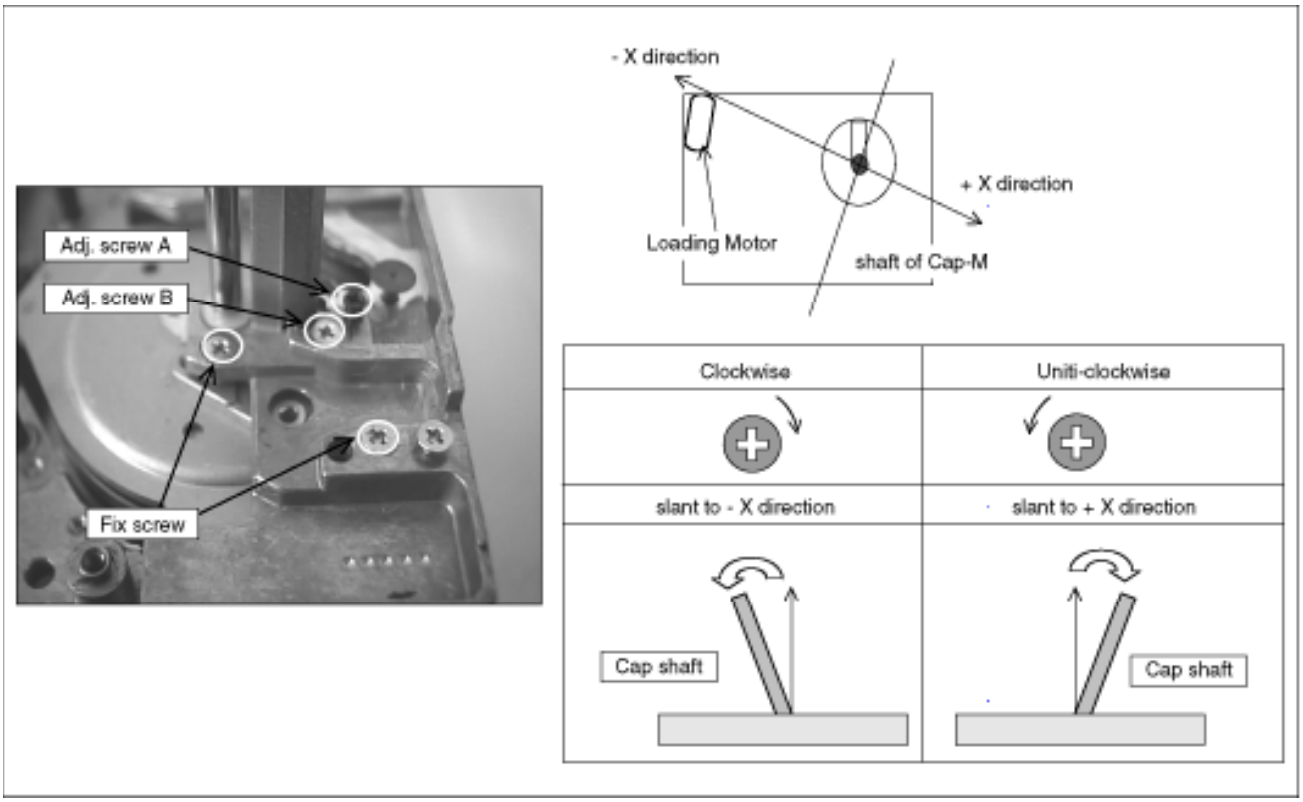


Fig. AD5-1

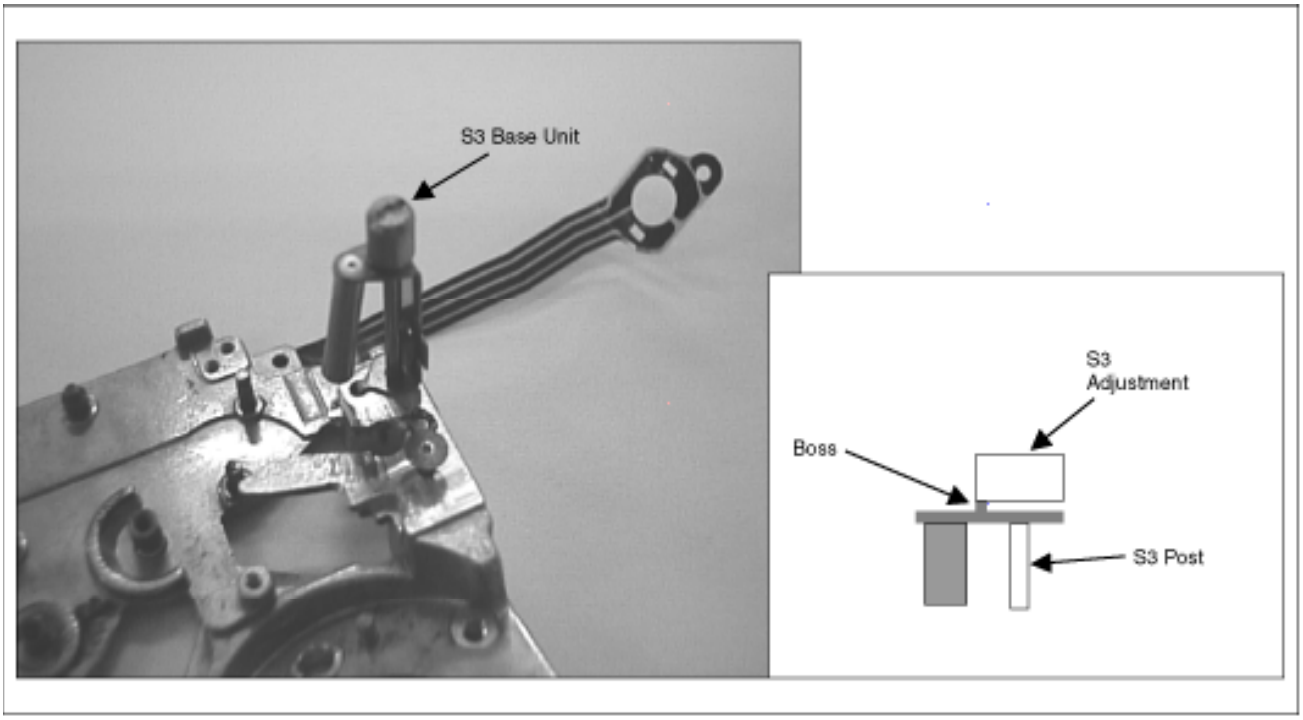


Fig. AD5-2

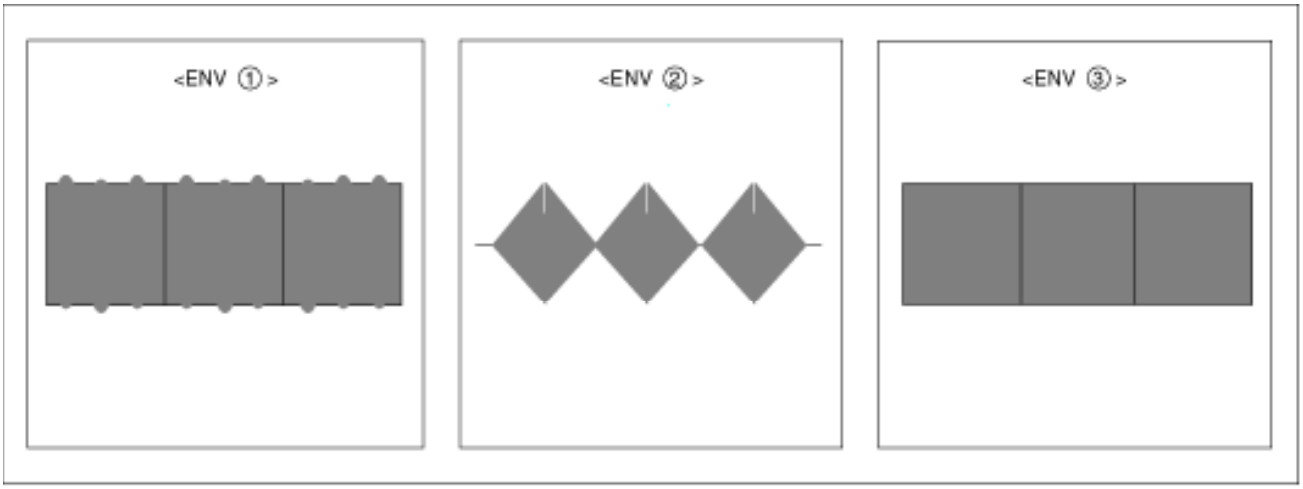


Fig. AD6-1

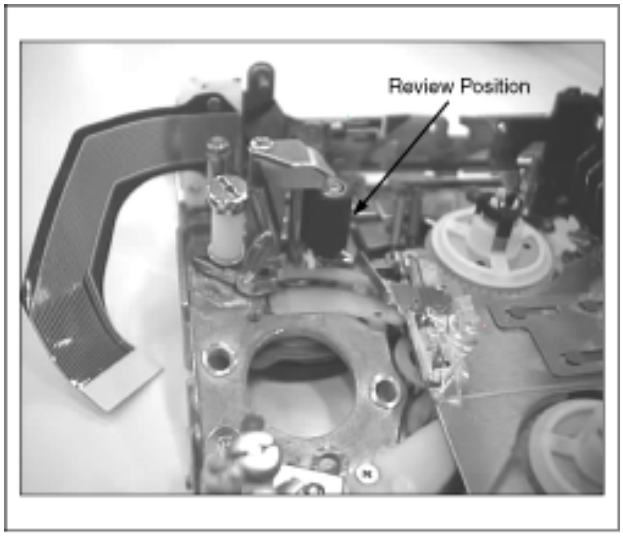
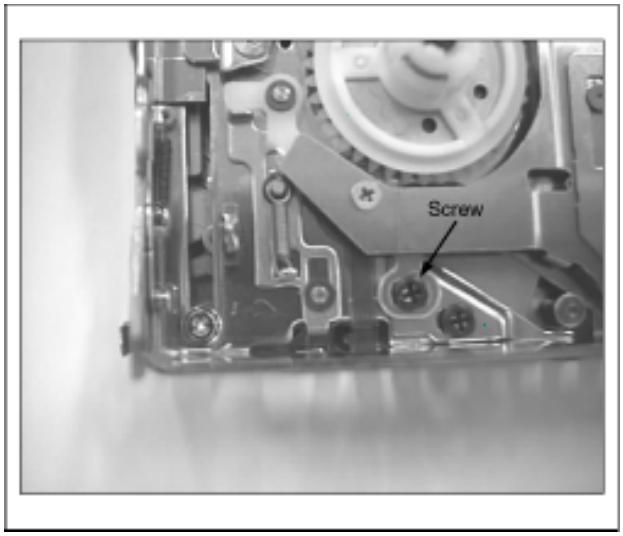


Fig. AD6-2

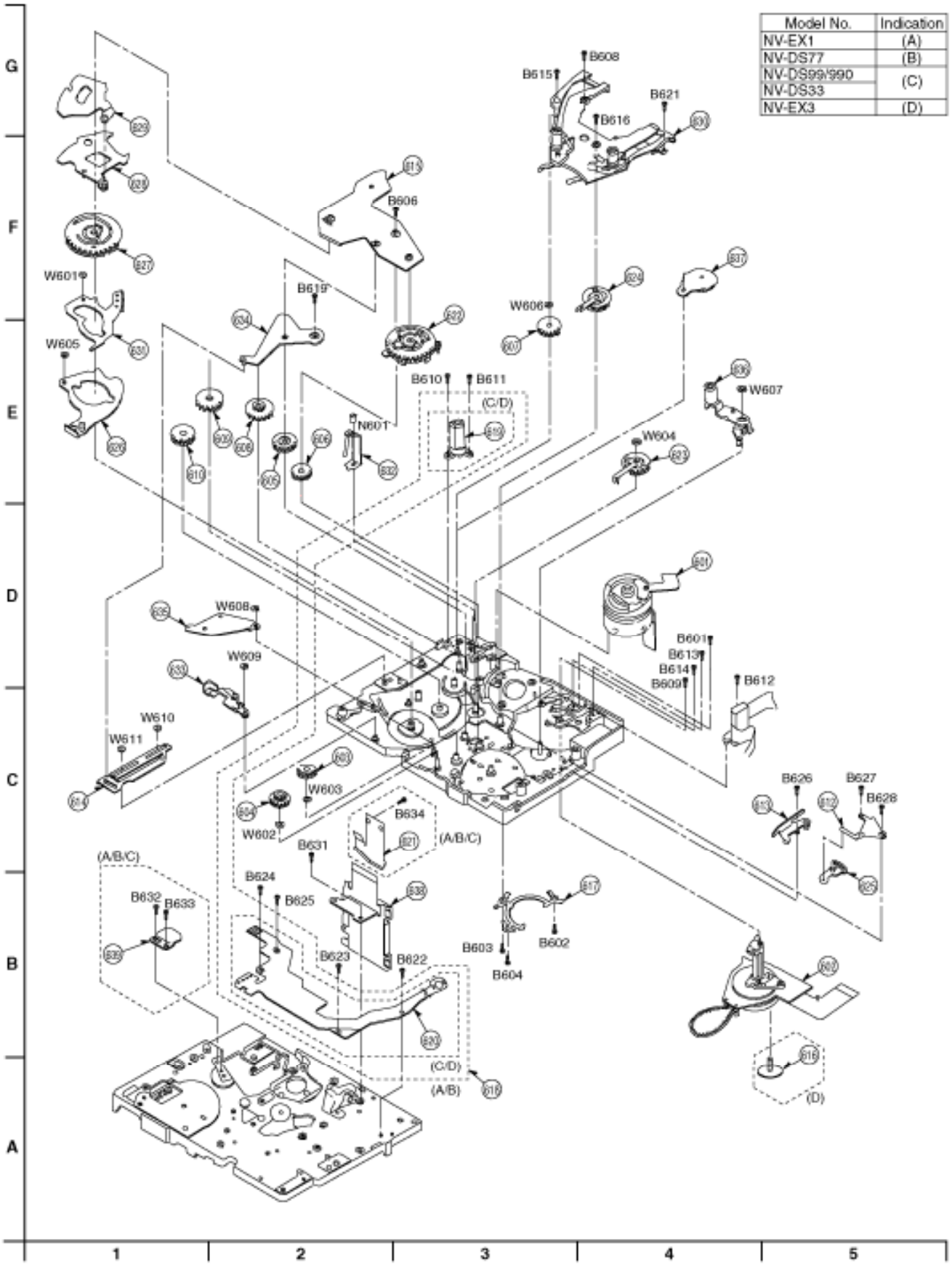


TOP PREVIOUS NEXT

6.1 Q1& Q2 VCR MECHANISM SECTON (1)

TOP PREVIOUS NEXT

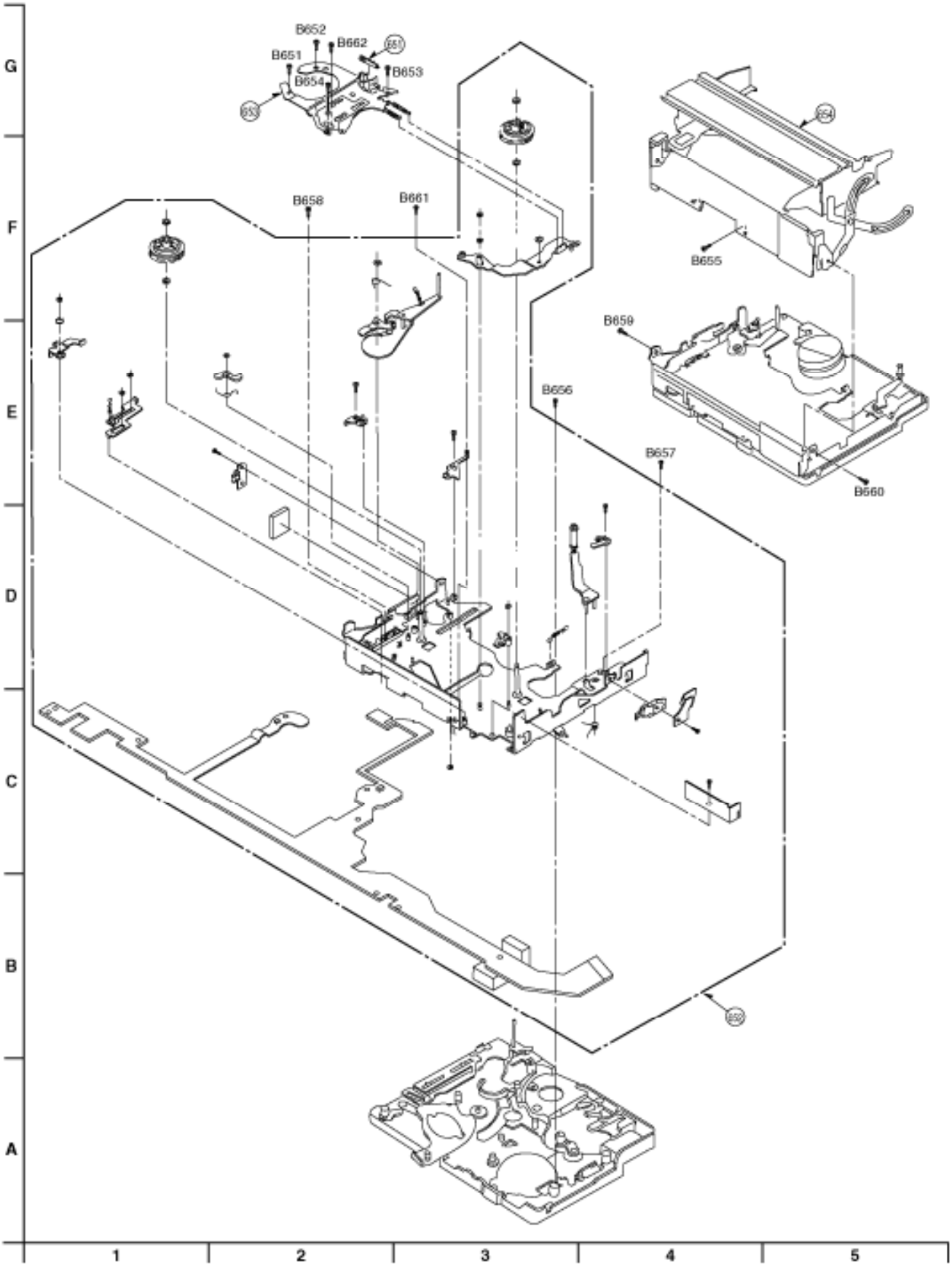
TOP PREVIOUS NEXT


Model No. | Indication
NV-EX1 | (A)
NV-DS77 | (B)
NV-DS99/990 | (C)
NV-DS33 | (C)
NV-EX3 | (D)
G
F
E
D
C
B
A
1
2
3
4
5
B608
B615
B621
B616
B606
B619
W601
W605
W606
B610
B611
(C/D)
W607
W604
N601
W608
W609
W610
W611
W603
W602
B601
B613
B614
B609
B612
B626
B627
B628
B634
(A/B/C)
B631
B624
B625
B632
B633
B623
B622
B603
B602
B604
(C/D)
(A/B)
(D)

6.2 Q1& Q2 VCR MECHANISM SECTION (2)

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT


B652
B662
B651
B653
B654
B658
B661
B655
B650
B656
B657
B660
G
F
E
D
C
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A
1
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4
5

6.3 Q3 VCR MECHANISM SECTION (1)

TOP PREVIOUS NEXT

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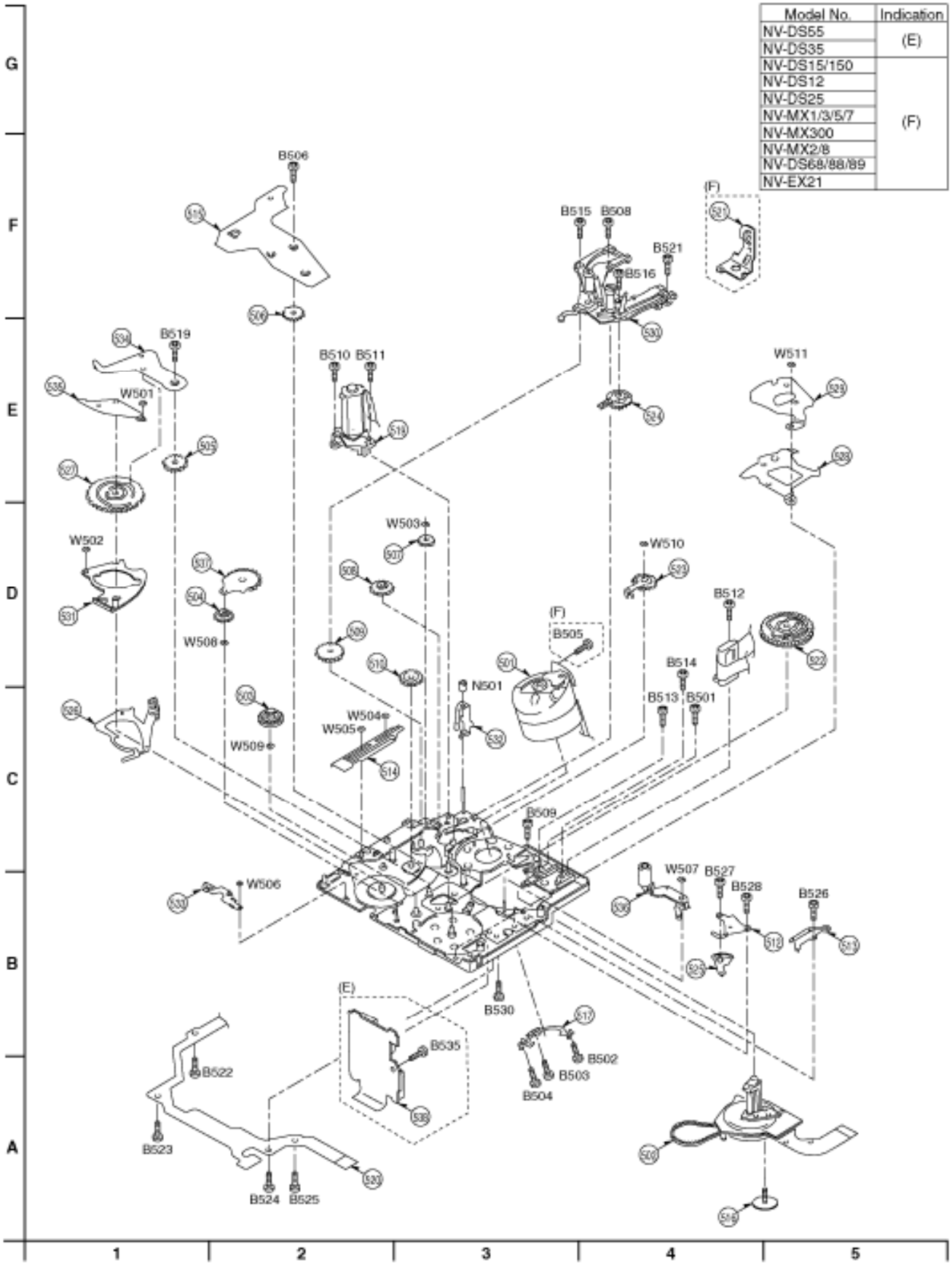
Model No.	Indication
NV-DS55	(E)
NV-DS35	
NV-DS15/150	(F)
NV-DS12	
NV-DS25	
NV-MX1/3/5/7	
NV-MX300	
NV-MX2/8	
NV-DS68/88/89	
NV-EX21	



6.4 Q3 VCR MECHANISM SECTION (2)

TOP PREVIOUS NEXT

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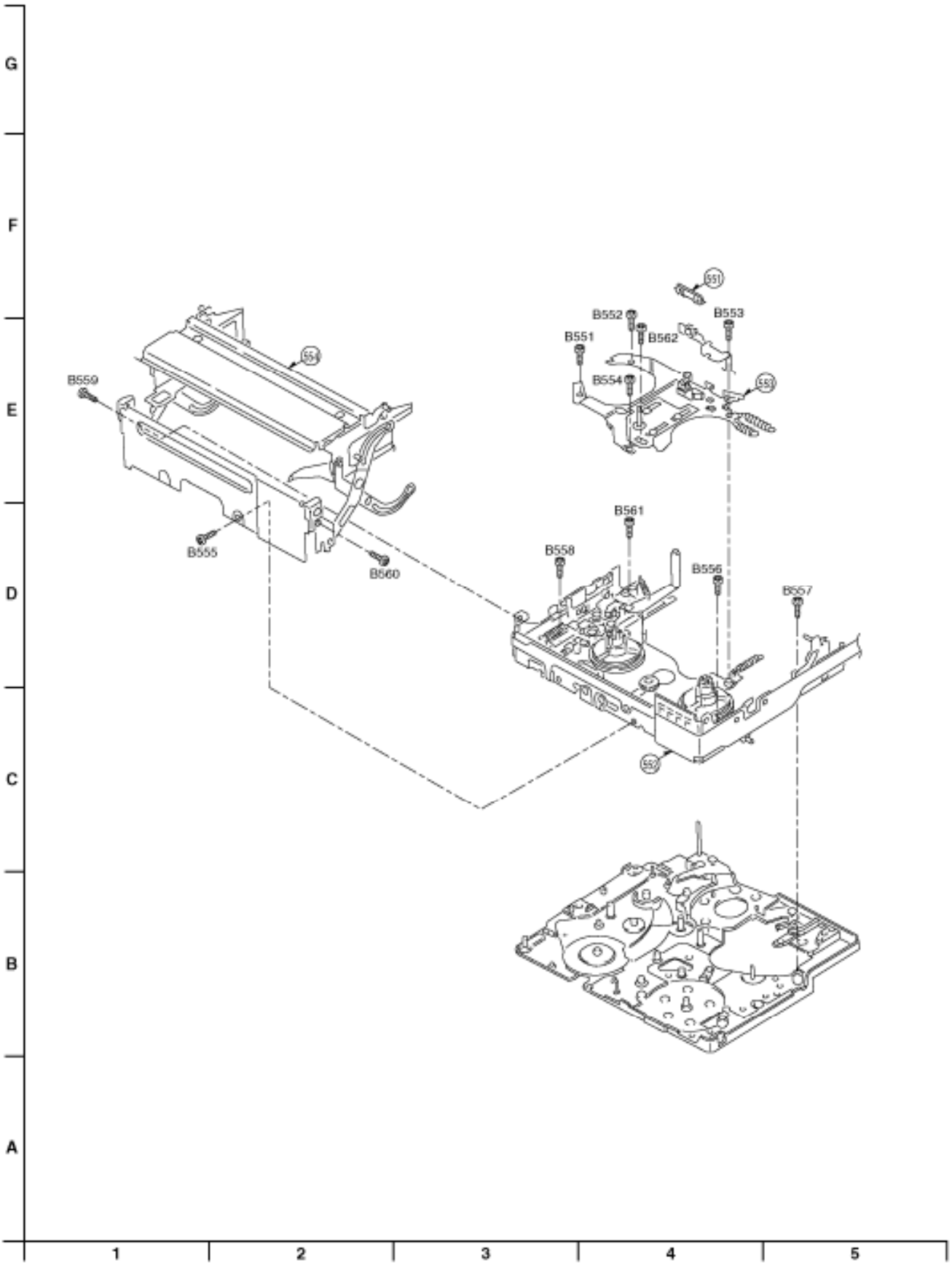
G
F
E
D
C
B
A
1
2
3
4
5
B551
B552
B553
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B556
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B562
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557

7.1 Q1& Q2 VCR MECHANISM SECTION
(1) PARTS LIST

TOP PREVIOUS NEXT

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark: △ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Remarks
601	VEG1495	CYLINDER U.	
602	DFX25A7VWB	CAPSTAN U.	
603	VDG1284	DRIVE GEAR	
604	VDG1285	CENTER GEAR	
605	VDG1290	INTERFACE GEAR (C)	
606	VDG1291	INTERFACE GEAR (D)	
607	VDG1295	DECELERATION (A)	NV-EX1,NV-DS77
607	VDG1330	DECELERATION (A)	NV-DS99/990,NV-DS33,NV-EX3
608	VDG1296	DECELERATION (B)	NV-EX1,NV-DS77
608	VDG1331	DECELERATION (B)	NV-DS99/990,NV-DS33,NV-EX3
609	VDG1297	INTERFACE GEAR (A)	
610	VDG1303-A	INTERFACE GEAR (B)	
612	VMA9908	PULLEY COVER	
613	VMA9916	T4 GUIDE	
614	VMA9917	TENSION PLATE	
615	VMA0E52	GEAR COVER	
616	VHD1430	CAPSTAN HOLDER	NV-EX3
617	VMC1443	CYLINDER SPRING	
618	L6DA8DKC0001	LOADING MOTOR U.	NV-EX1,NV-DS77
619	VEM0679	LOADING MOTOR U.	NV-DS99/990,NV-DS33,NV-EX3
620	VWJ1297	MECHANISM INTERFACE FLEX.	NV-DS99/990,NV-DS33,NV-EX3
622	K0ZZ00000453	MODE SWITCH	
623	VXA6124	S LOAD GEAR U.	
624	VXA6125	T LOAD GEAR U.	

625	VXA6133	PULLEY COVER	
626	VXA6134	CHASSIS RADON U.	
627	VXA6135	CAM GEAR U.	
628	VXA6136	PINCH BEETLE	
629	VXA6137	RELEASE BEETLE	
630	VXA6138	RAIL U.	
631	VXA6169	BOAT RADON U.	
632	VXA6184	S3 BASE U.	
633	VXL2814	EJECT LEVER U.	
634	VXL2815	TENSION LEVER U.	
635	VXL2816	EJECT ARM U.	
636	VXL2897	PINCH ARM U.	
637	VXL2818	IDLER U.	
638	VYK8485	HEAD AMP U.	NV-EX1
638	VYK8244	HEAD AMP U.	NV-DS77
638	VYK8886	HEAD AMP U.	NV-DS99/990,NV-DS33
638	VYK9102	HEAD AMP U.	NV-EX3
621	VSC4802	SHIELD CASE	NV-EX1
621	VSC4758	SHIELD CASE	NV-DS77,NV-DS99/990,NV-DS33
639	VMA9926	CAPSTAN HOLDER	NV-EX1,NV-DS77,NV-DS99/990,NV-DS33
B601	VHD1155	SCREW	
B602	VHD1372	SCREW	
B603	VHD1372	SCREW	
B604	VHD1372	SCREW	
B606	VHD1160	SCREW	
B608	VHD1160	SCREW	
B609	VHD1406	SCREW	
B610	VHD1161	SCREW	
B611	VHD1161	SCREW	
B612	VHD1161	SCREW	
B613	VHD1161	SCREW	
B614	VHD1161	SCREW	

B615	VHD1162	SCREW	
B616	VHD1162	SCREW	
B619	VHD1163	SCREW	
B621	XQN12+B1	SCREW	
B622	XQN12+A1	SCREW	
B623	XQN12+A1	SCREW	
B624	XQN12+A1	SCREW	
B625	XQN12+A1	SCREW	
B626	XQN12+A1	SCREW	
B627	XQN12+A12FN	SCREW	
B628	XQN12+A12FN	SCREW	
B631	XQN12+B2	SCREW	
B632	VHD1162	SCREW	NV-EX1,NV-DS77,NV-DS99/990,NV-DS33
B633	VHD1162	SCREW	NV-EX1,NV-DS77,NV-DS99/990,NV-DS33
B634	XQN16+B12	SCREW	NV-EX1,NV-DS77,NV-DS99/990,NV-DS33
N601	VHN0324	NUT	
W601	VMX2028	WASHER	
W602	VMX2751	WASHER	
W603	VMX2752	WASHER	
W604	VMX2392	WASHER	
W605	VMX2028	WASHER	
W606	VMX2028	WASHER	
W607	VMX2028	WASHER	
W608	VMX2028	WASHER	
W609	VMX2028	WASHER	
W610	VMX2028	WASHER	
W611	VMX2028	WASHER	

TOP PREVIOUS NEXT

7.2 Q1& Q2 VCR MECHANISM SECTION (2) PARTS LIST

TOP PREVIOUS NEXT

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark: △ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Remarks
651	VMD2975	LED HOLDER	
652	VXA6537	SUB SHASSIS U.	NV-DS99/990,NV-DS33,NV-EX3
652	VXA6146	SUB SHASSIS U.	NV-EX1,NV-DS77
653	VXA6151	COVER PLATE U.	
654	VXA6159	CASSETTE UP U.	
B651	VHD1162	SCREW	
B652	VHD1162	SCREW	
B653	VHD1162	SCREW	
B654	VHD1162	SCREW	
B655	VHD1207	SCREW	
B656	VHD1164	SCREW	
B657	VHD1164	SCREW	
B658	VHD1171	SCREW	
B659	VHD1314	SCREW	
B660	VHD1314	SCREW	
B661	VHD1163	SCREW	
B662	VHD1163	SCREW	

TOP PREVIOUS NEXT

7.3 Q3 VCR MECHANISM SECTION (1) PARTS LIST

TOP PREVIOUS NEXT

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Remarks
501	VEG1570	CYLINDER U.	NV-EX21,NV-DS68/88/89/25/12/15/150,NV-MX2/8/300/1/3/5/7
501	VEG1495	CYLINDER U.	NV-DS35/55
502	DFX25A7VWC	CAPSTAN U.	NV-EX21,NV-DS68/88/89/25/12/15/150,NV-MX2/8/300/1/3/5/7
502	DFX25A7VWB	CAPSTAN U.	NV-DS35/55
503	VDG1284	DRIVE GEAR	
504	VDG1285	CENTER GEAR	
505	VDG1290	INTERFACE GEAR (C)	
506	VDG1291	INTERFACE GEAR (D)	
507	VDG1330	DECELERATION GEAR (A)	
508	VDG1331	DECELERATION GEAR (B)	
509	VDG1297	INTERFACE GEAR (A)	
510	VDG1303	INTERFACE GEAR (B)	
512	VMA9908	PULLEY COVER	
513	VMA9916	T4 GUIDE	
514	VMA9917	TENSION PLATE	
515	VMA0E52	GEAR COVER	
516	VHD1430	CAPSTAN HOLDER	
517	VMC1443	CYLINDER SPRING	
519	VEM0679	LOADING MOTOR U.	
520	VWJ1297	MECHANISM INTERFACE FLEX.	
521	VMP6271	RT FLEX. FRAME	NV-EX21,NV-DS68/88/89/25/12/15/150,NV-MX2/8/300/1/3/5/7
522	K0ZZ00000453	MODE SWITCH	
523	VXA6124	S LOAD GEAR U.	
524	VXA6125	T LOAD GEAR U.	

525	VXA6133	PULLEY	
526	VXA6134	CHASSIS RADON U.	
527	VXA6135	CAM GEAR U.	
528	VXA6136	PINCH BEETLE	
529	VXA6137	RELEASE BEETLE	
530	VXA6138	RAIL U.	
531	VXA6169	BOAT RADON U.	
532	VXA6184	S3 BASE U.	
533	VXL2814	EJECT LEVER U.	
534	VXL2815	TENSION LEVER U.	
535	VXL2816	EJECT ARM U.	
536	VXL2897	PINCH ARM U.	
537	VXL2818	IDLER U.	
538	VYK8886	HEAD AMP U.	NV-DS35/55
B501	VHD1155	SCREW	
B502	VHD1372	SCREW	
B503	VHD1372	SCREW	
B504	VHD1372	SCREW	
B505	XQN14+B1FN	SCREW	NV-EX21,NV-DS68/88/89/25/12/15/150,NV-MX2/8/300/1/3/5/7
B506	VHD1160	SCREW	
B508	VHD1160	SCREW	
B509	VHD1406	SCREW	
B510	VHD1161	SCREW	
B511	VHD1161	SCREW	
B512	VHD1161	SCREW	
B513	VHD1161	SCREW	
B514	VHD1161	SCREW	
B515	VHD1162	SCREW	
B516	VHD1162	SCREW	
B519	VHD1163	SCREW	
B521	XQN12+B1	SCREW	
B522	XQN12+A1	SCREW	

B523	XQN12+A1	SCREW	
B524	XQN12+A1	SCREW	
B525	XQN12+A1	SCREW	
B526	XQN12+A1	SCREW	
B527	XQN12+A12FN	SCREW	
B528	XQN12+A12FN	SCREW	
B530	XQN16+B2	SCREW	
B535	XQN16+B3	SCREW	NV-DS35/55
N501	VHN0324	NUT	
W501	VMX2028	WASHER	
W502	VMX2028	WASHER	
W503	VMX2028	WASHER	
W504	VMX2028	WASHER	
W505	VMX2028	WASHER	
W506	VMX2028	WASHER	
W507	VMX2028	WASHER	
W508	VMX2751	WASHER	
W509	VMX2752	WASHER	
W510	VMX2392	WASHER	
W511	VMX2028	WASHER	

TOP PREVIOUS NEXT

7.4 Q3 VCR MECHANISM SECTION (2) PARTS LIST

TOP PREVIOUS

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Remarks
551	VMD2975	LED HOLDER	
552	VXA6537	SUB CHASSIS U.	
553	VXA6151	COVER PLATE U.	
554	VXA6159	CASSETTE UP U.	
B551	VHD1162	SCREW	
B552	VHD1162	SCREW	
B553	VHD1162	SCREW	
B554	VHD1162	SCREW	
B555	VHD1207	SCREW	
B556	VHD1164	SCREW	
B557	VHD1164	SCREW	
B558	VHD1171	SCREW	
B559	VHD1314	SCREW	
B560	VHD1314	SCREW	
B561	VHD1163	SCREW	
B562	VHD1163	SCREW	

TOP PREVIOUS